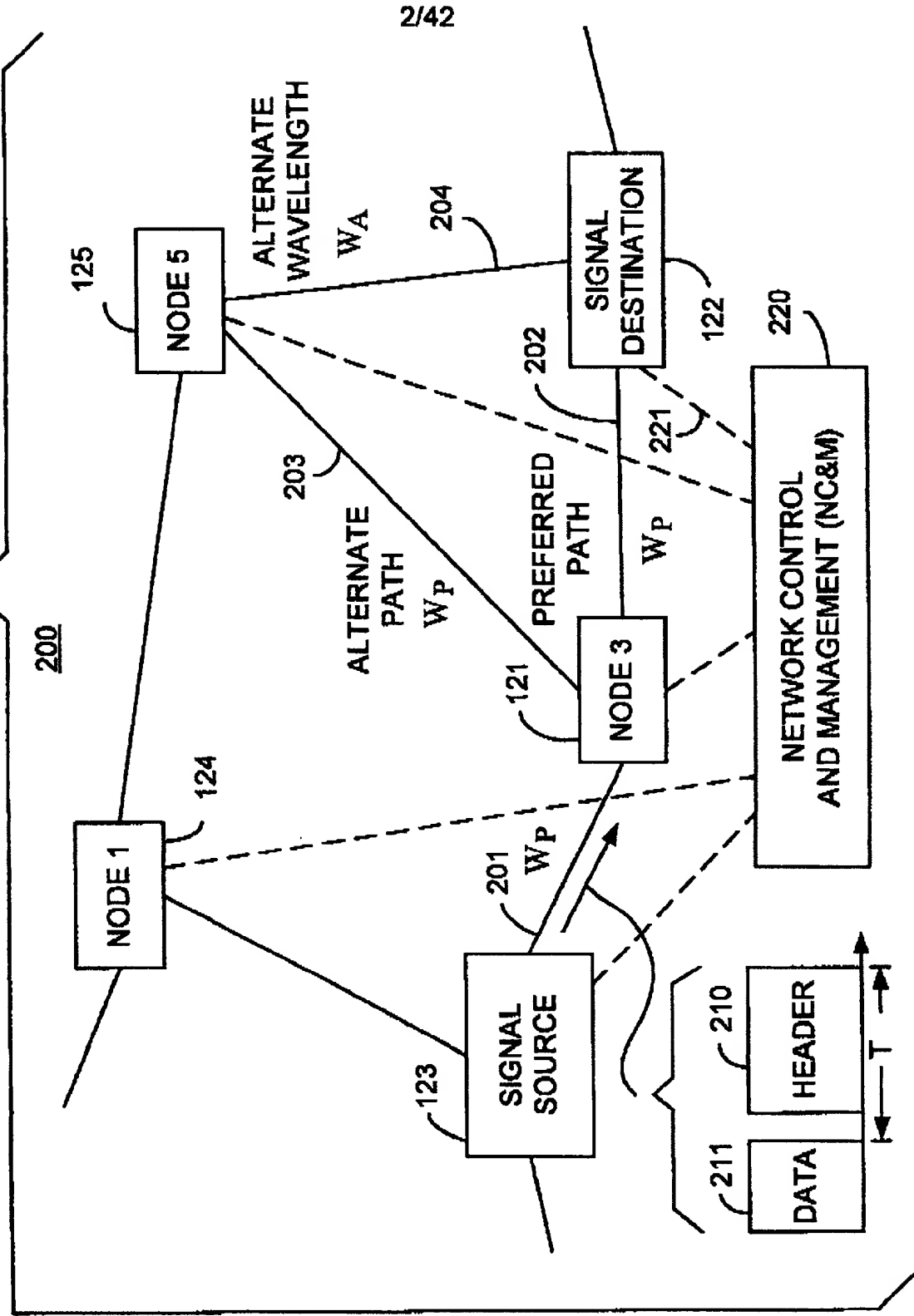


FIG. 1

FIG. 2



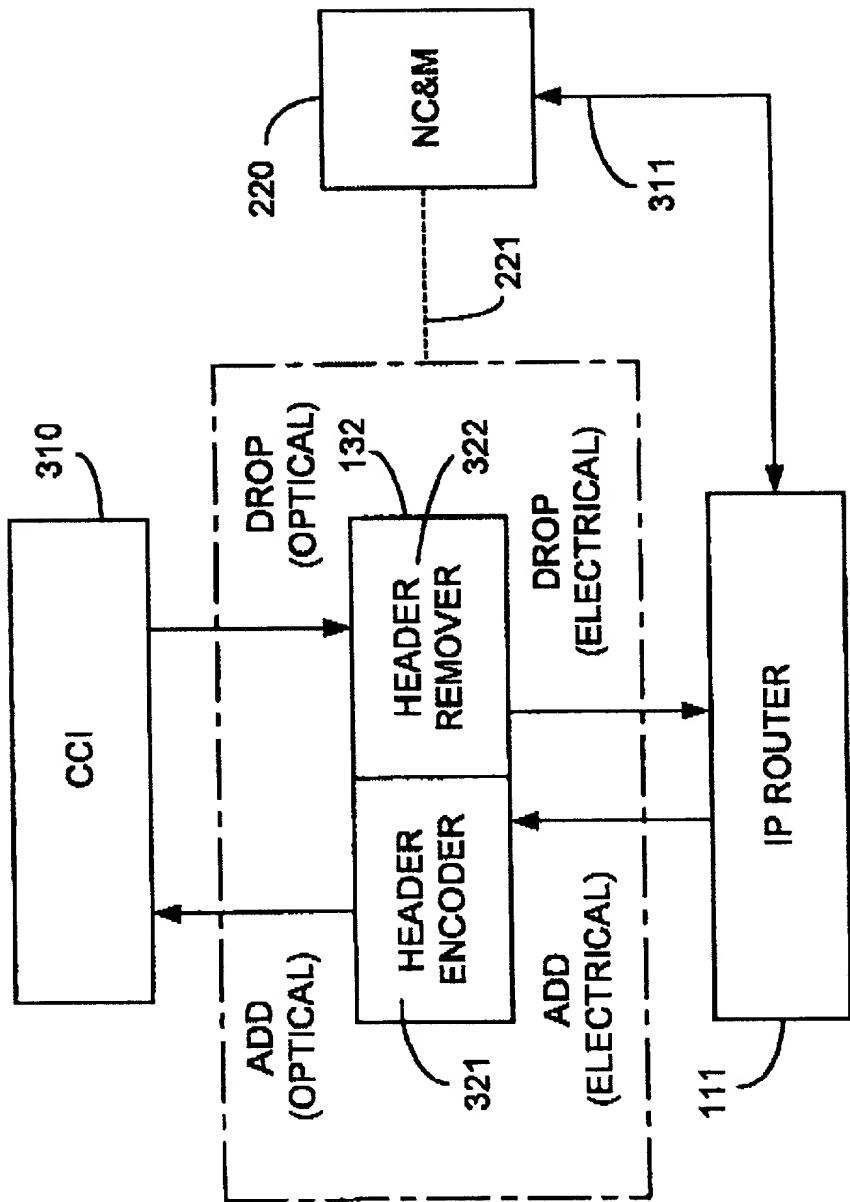


FIG. 3

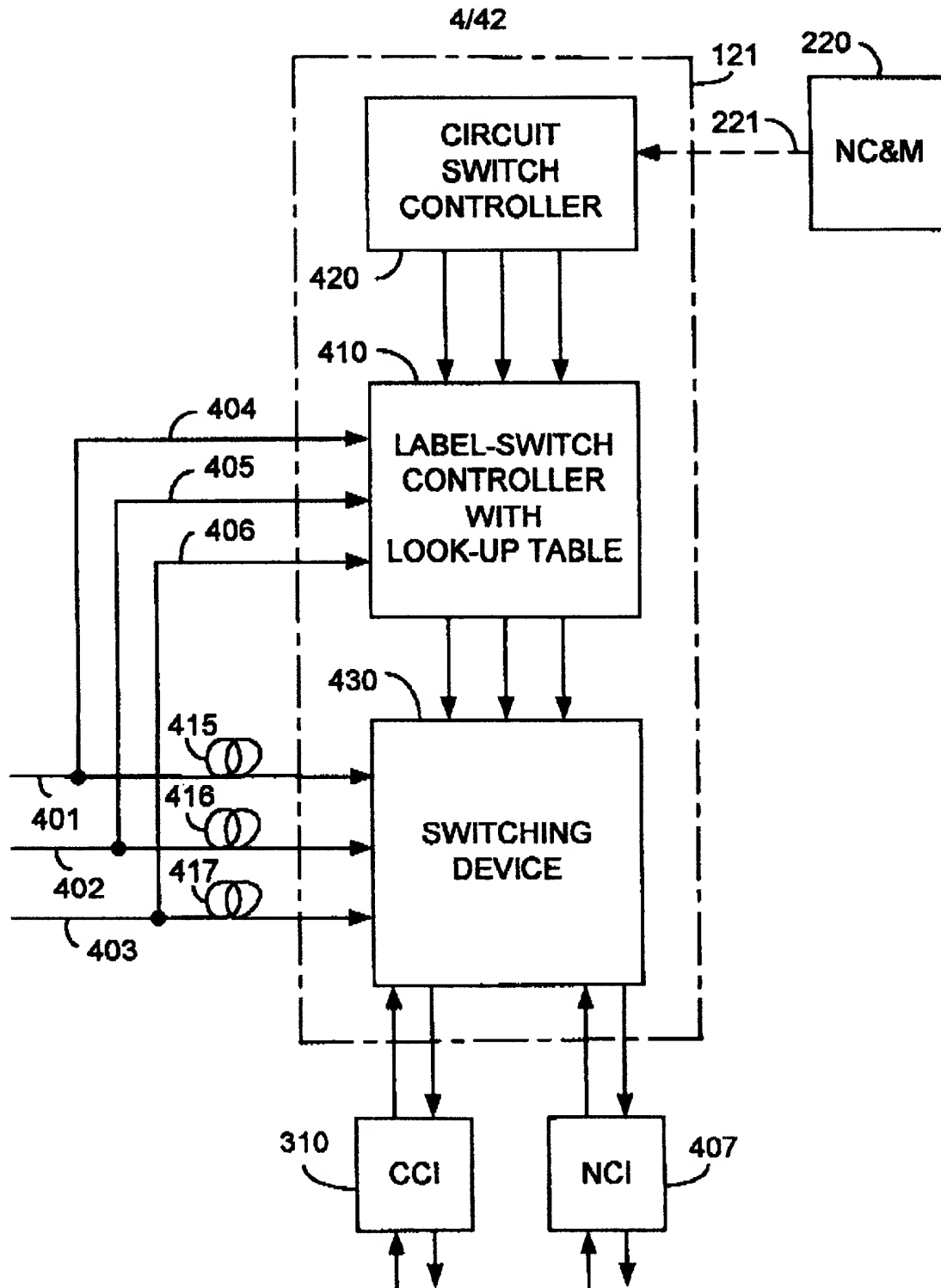


FIG. 4

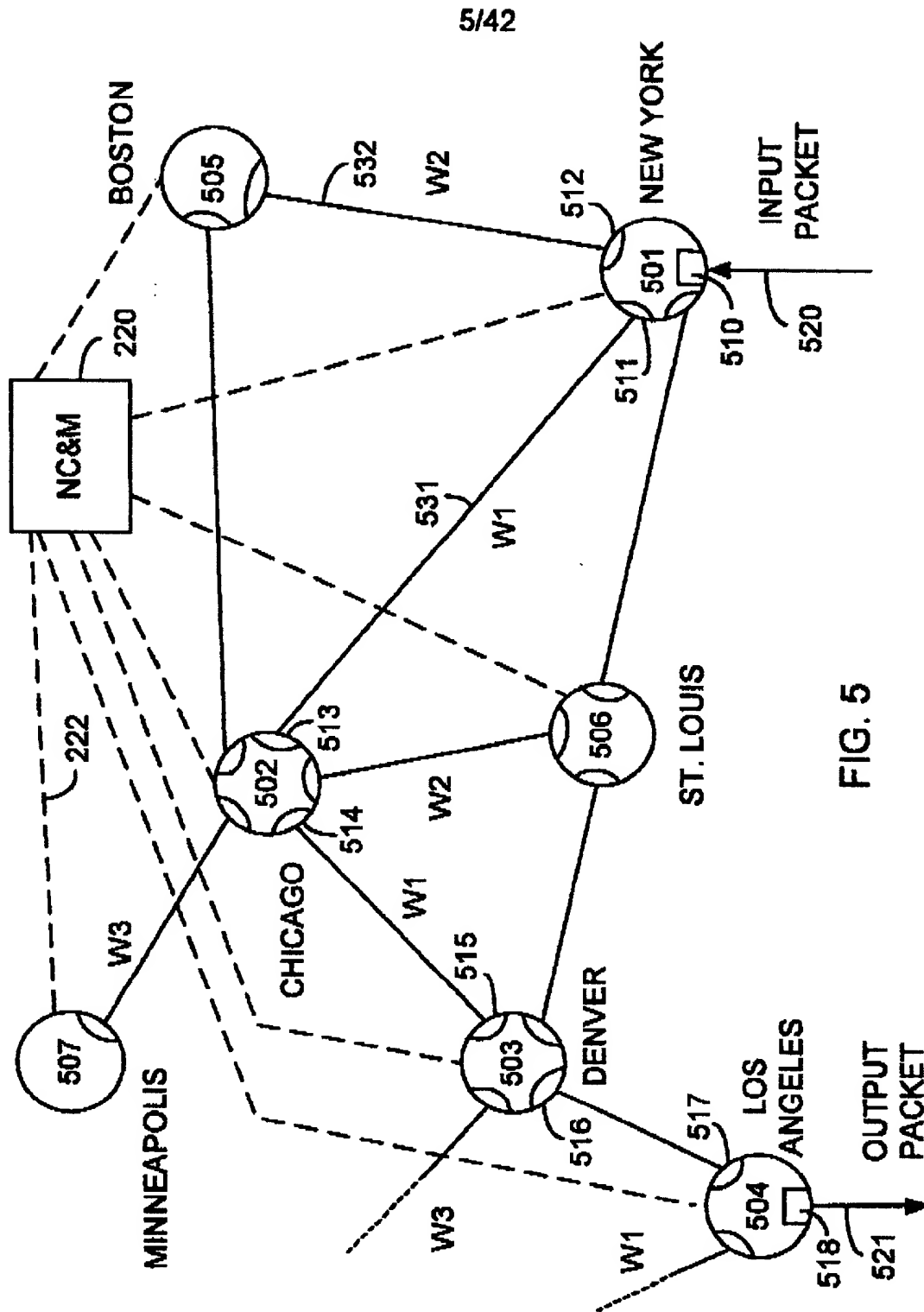


FIG. 5

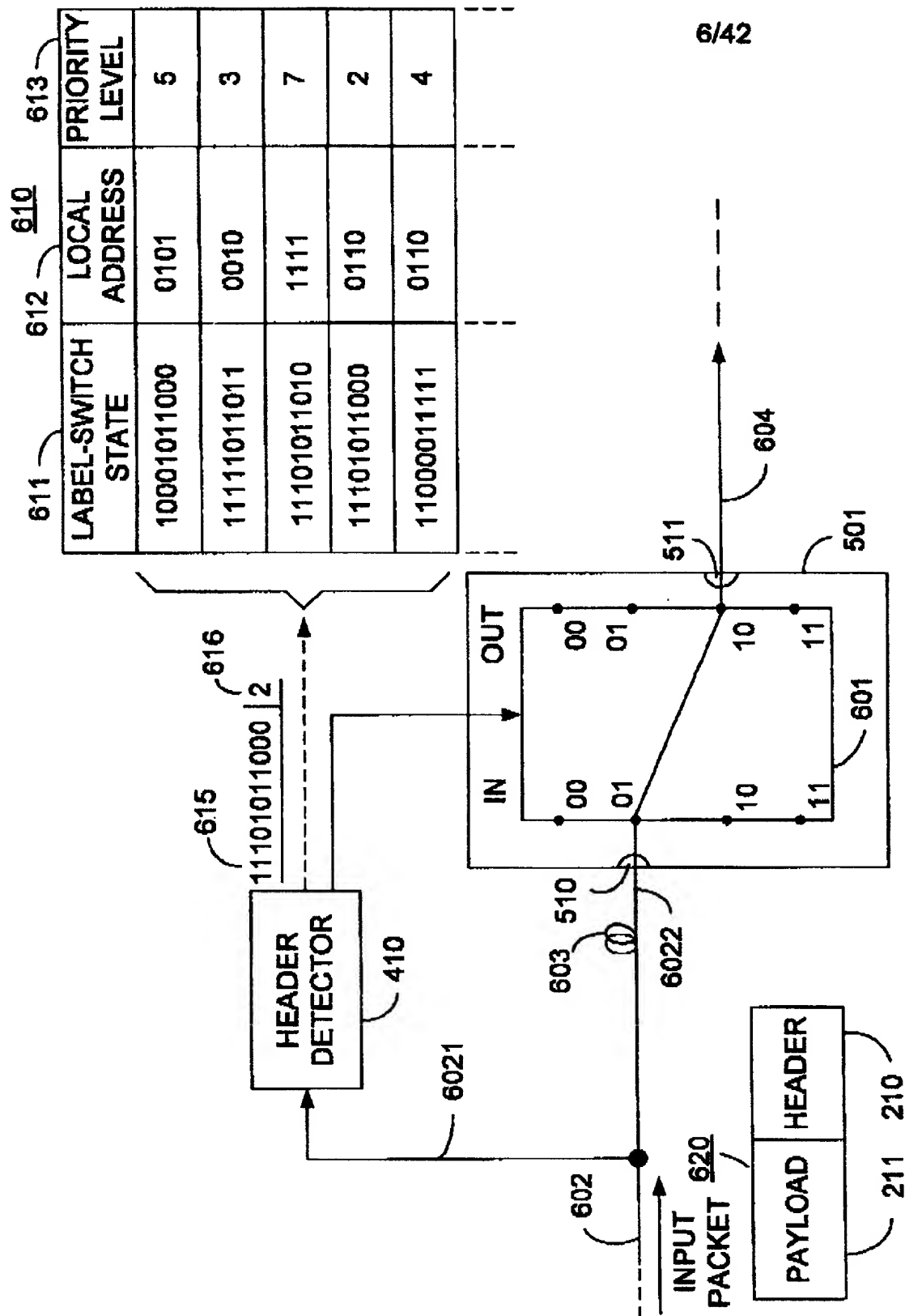
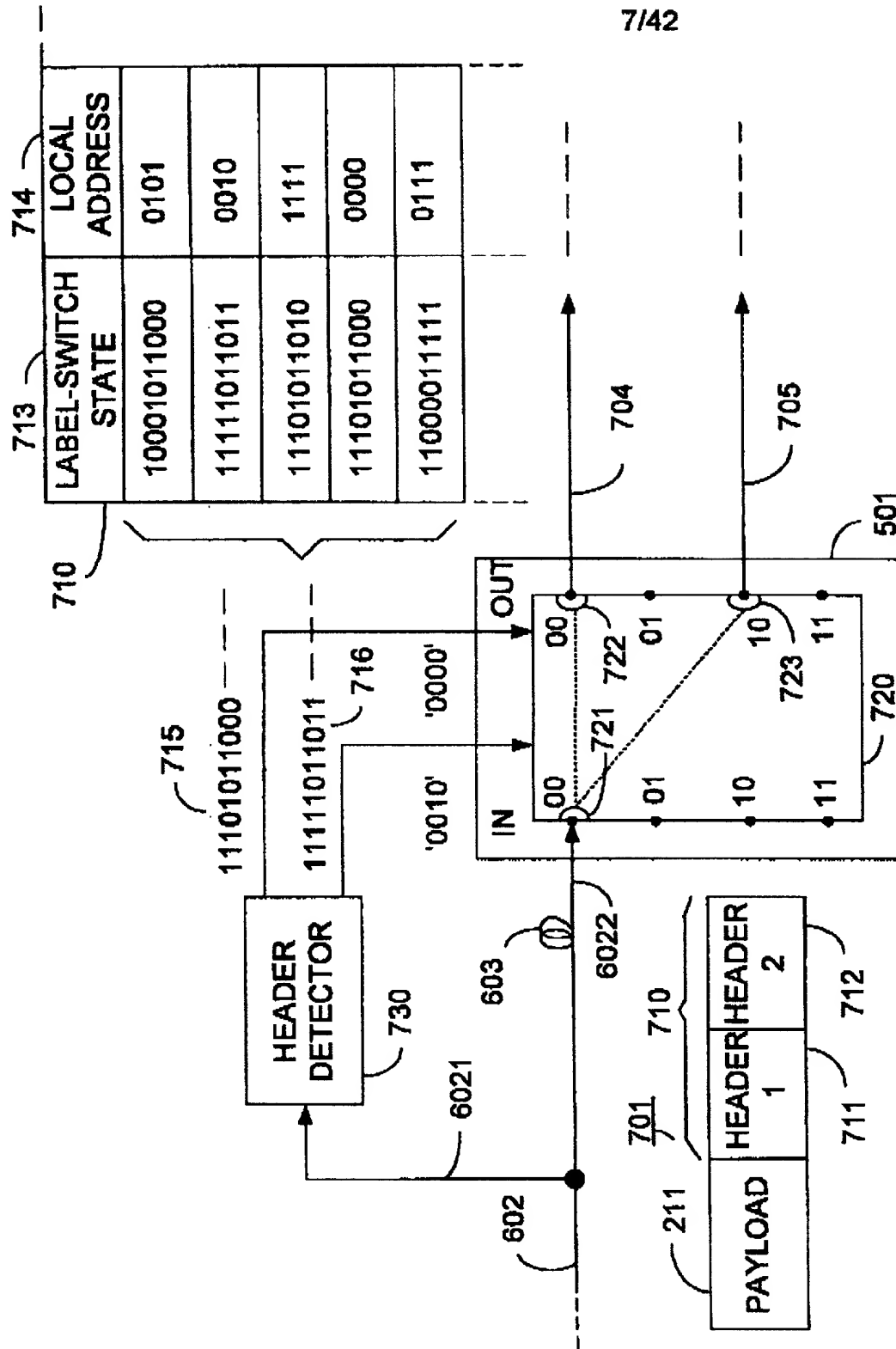


FIG. 6



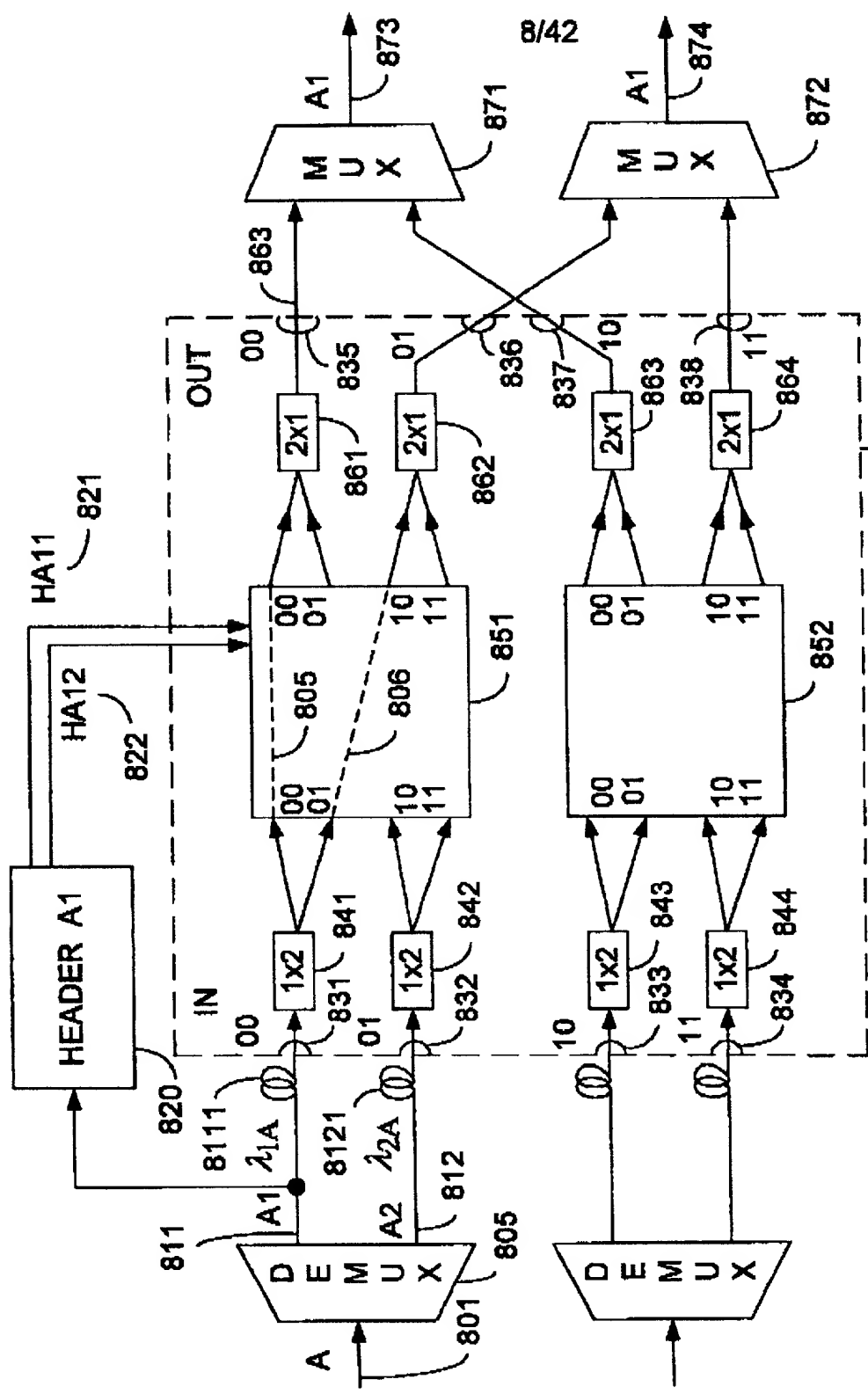


FIG. 8

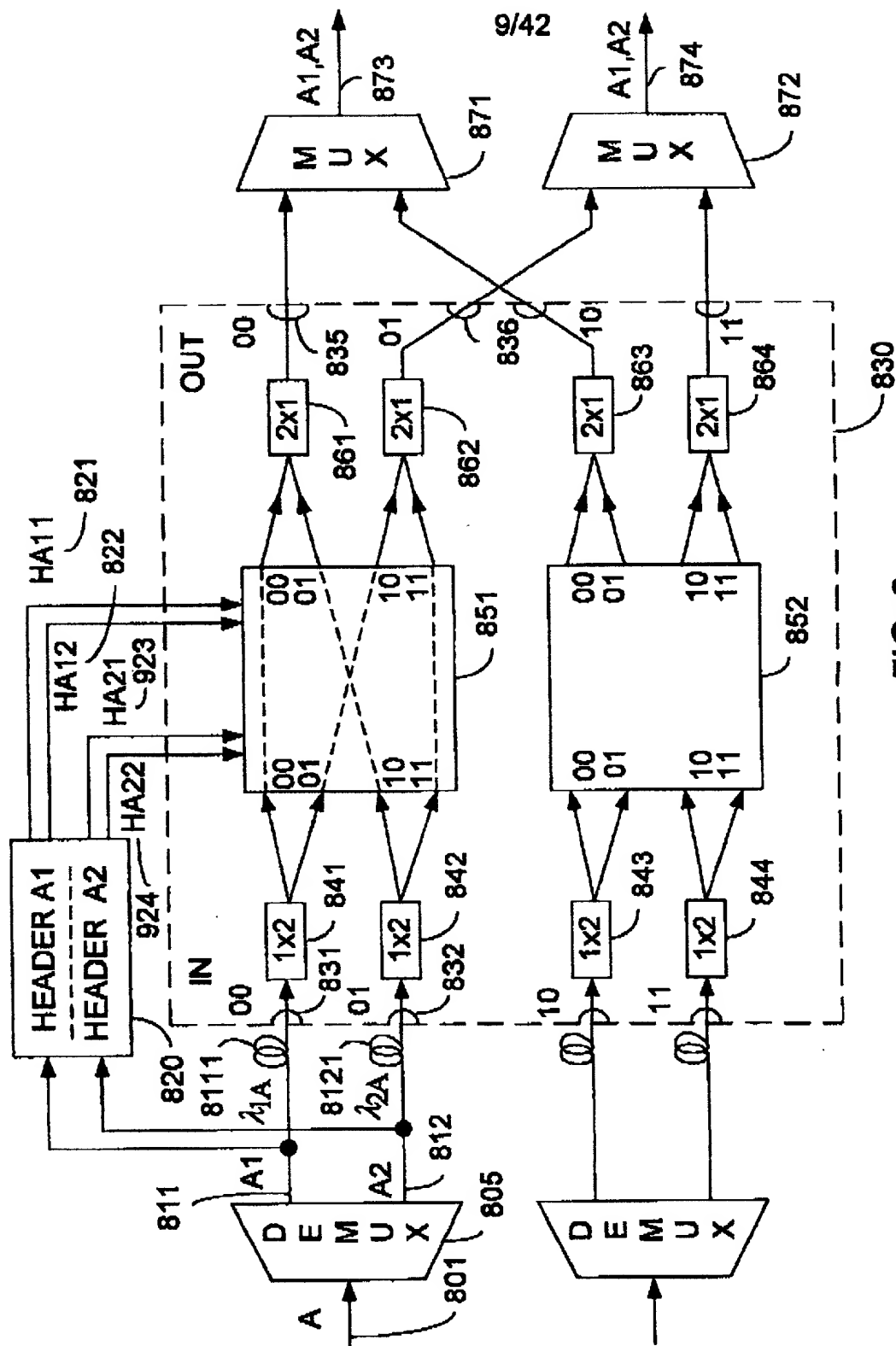
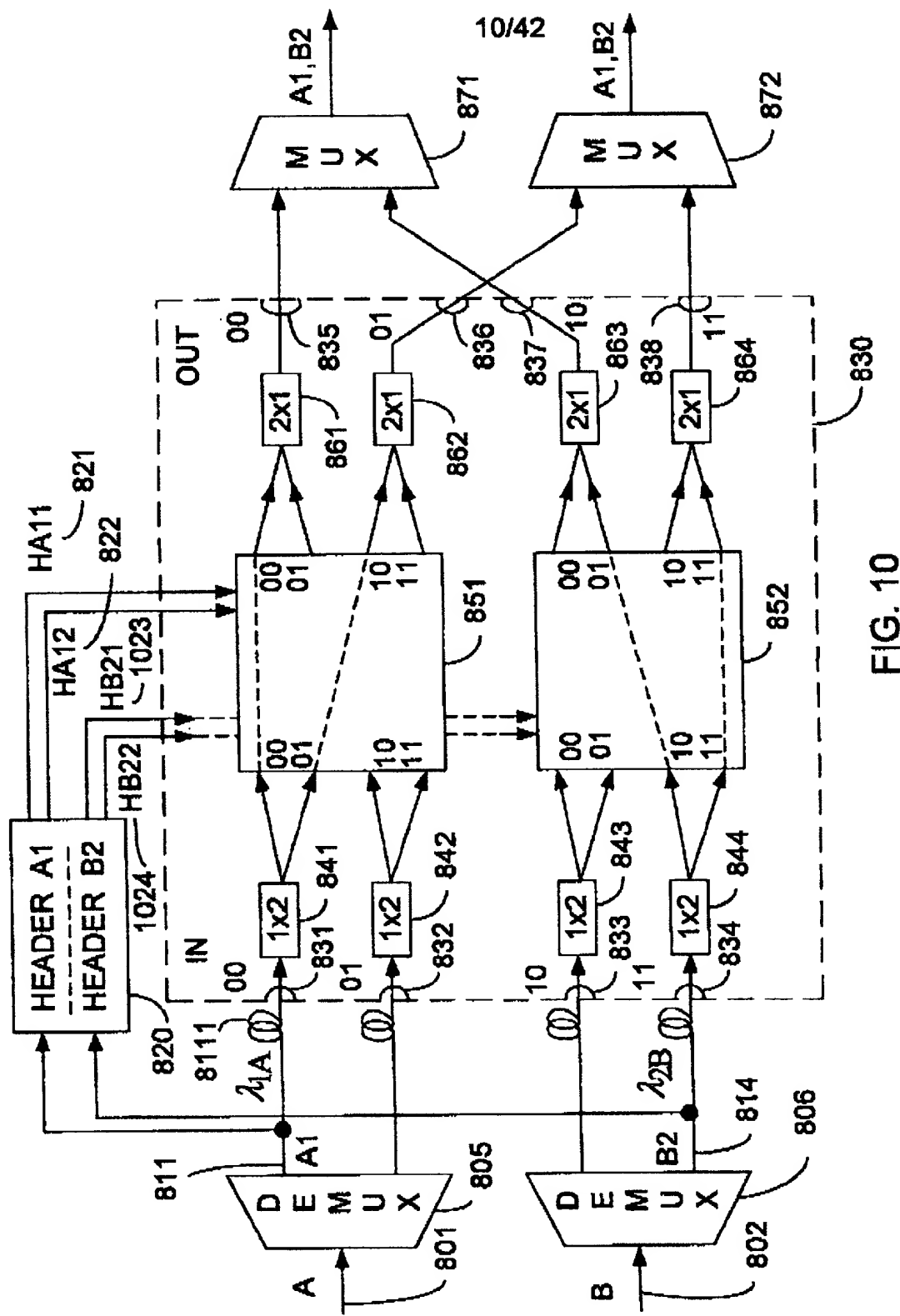


FIG. 9



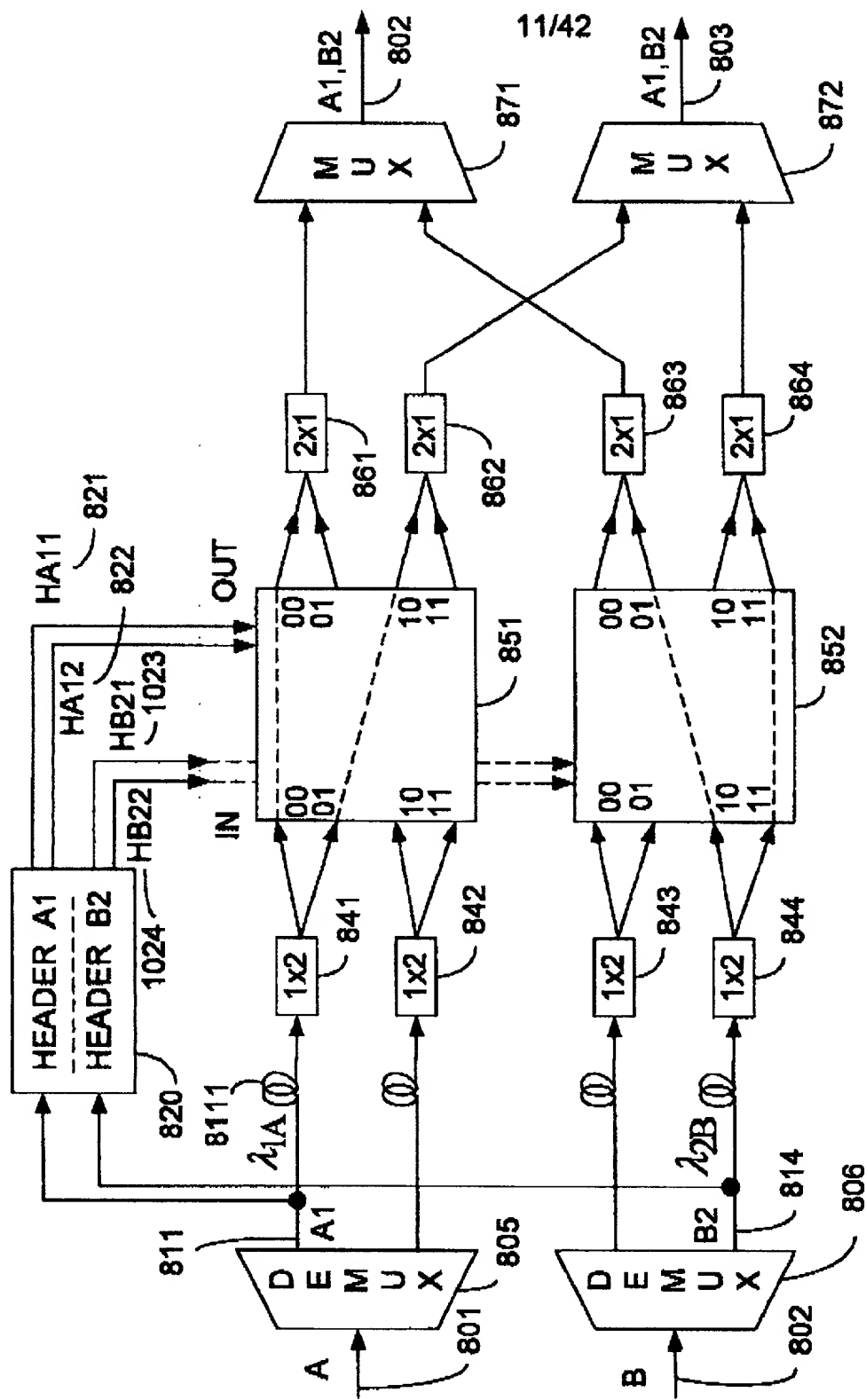


FIG. 11

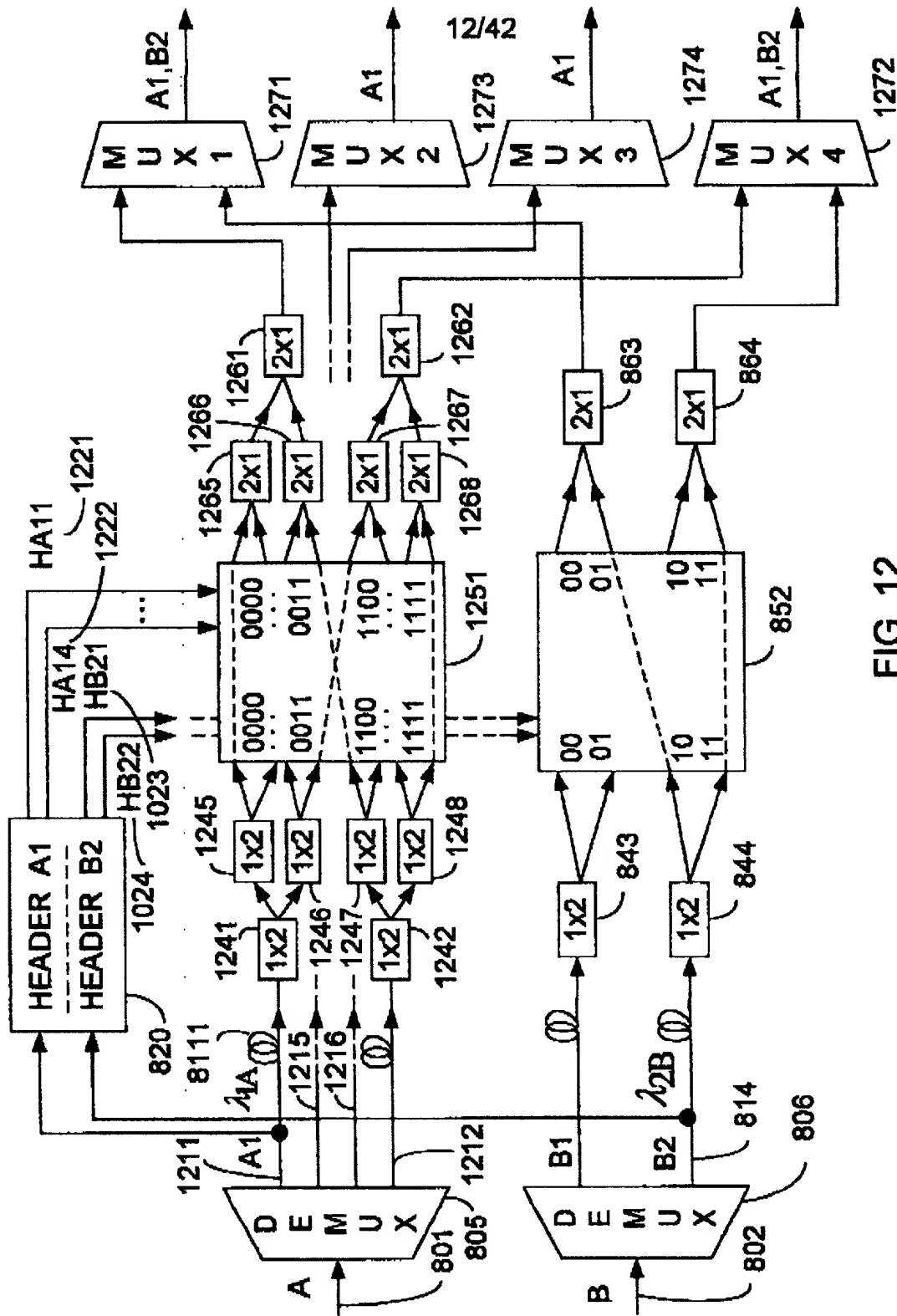


FIG. 12

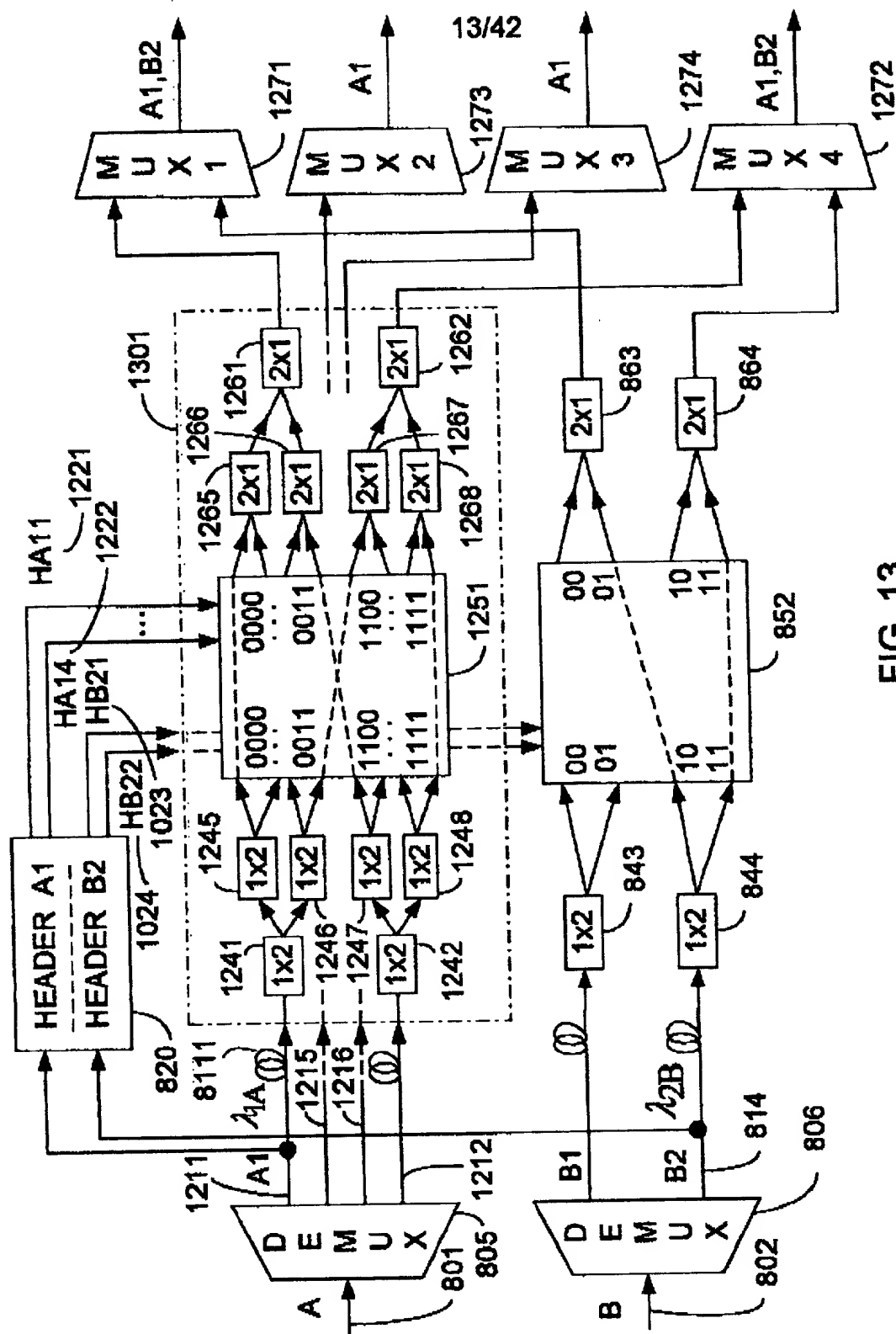


FIG. 13

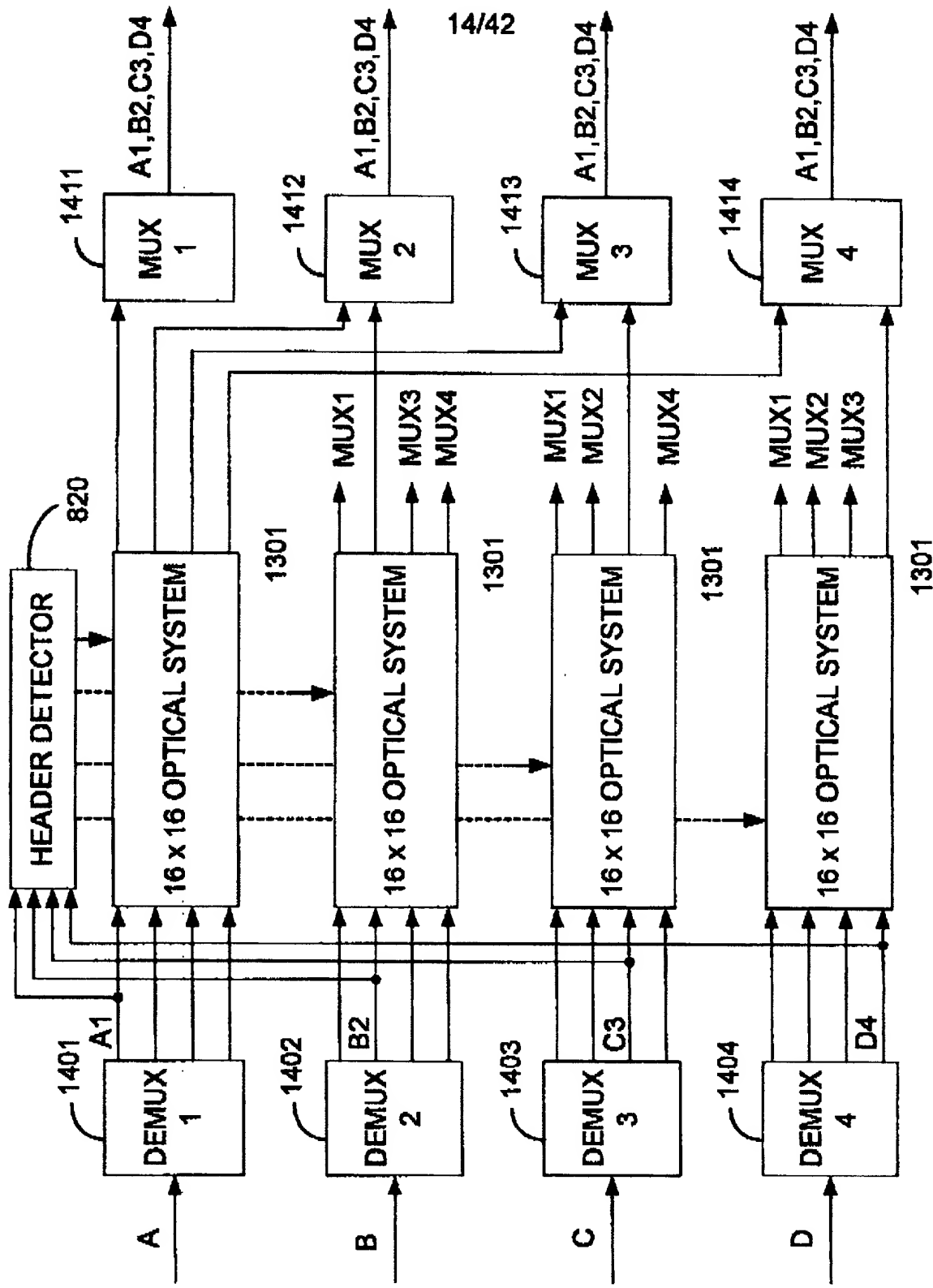


FIG. 14

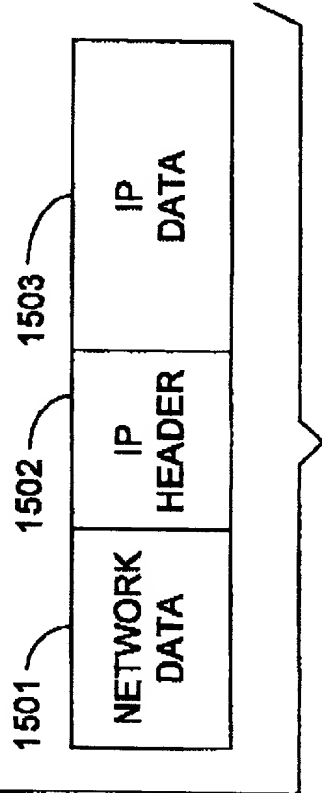
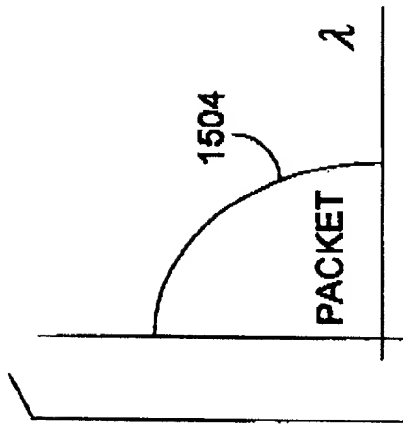


FIG. 15A

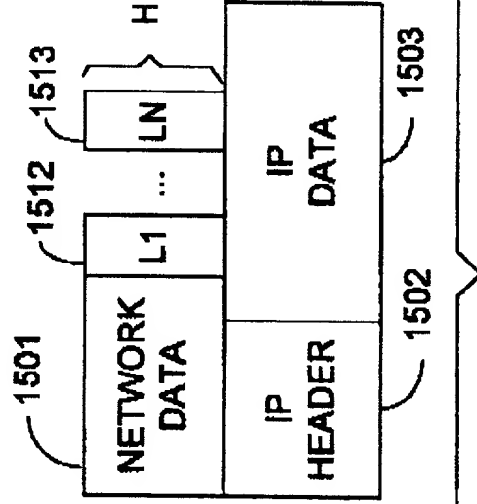
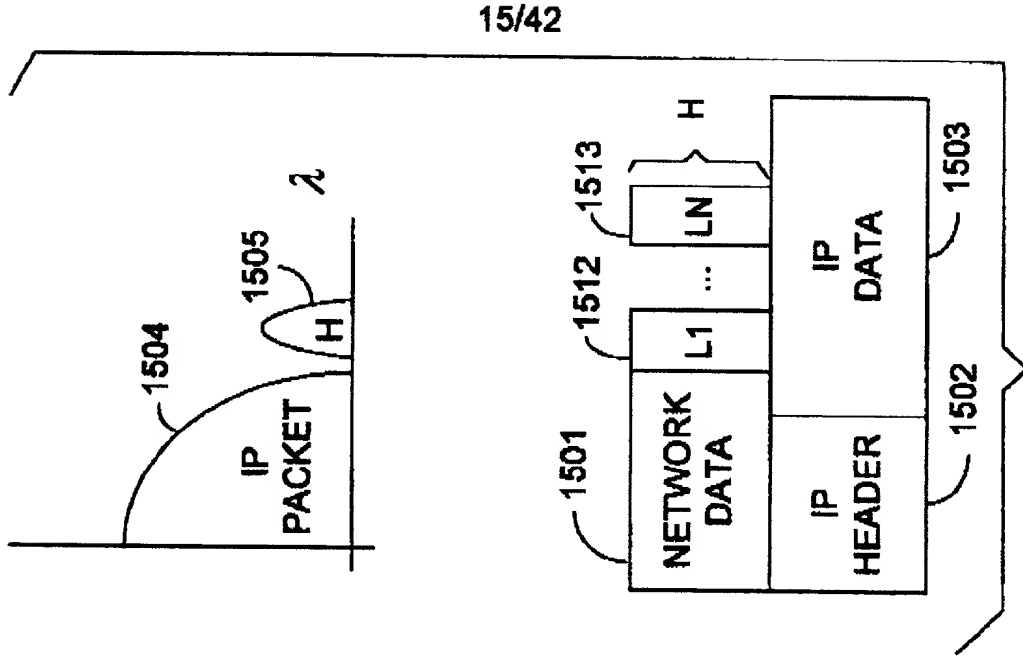


FIG. 15B

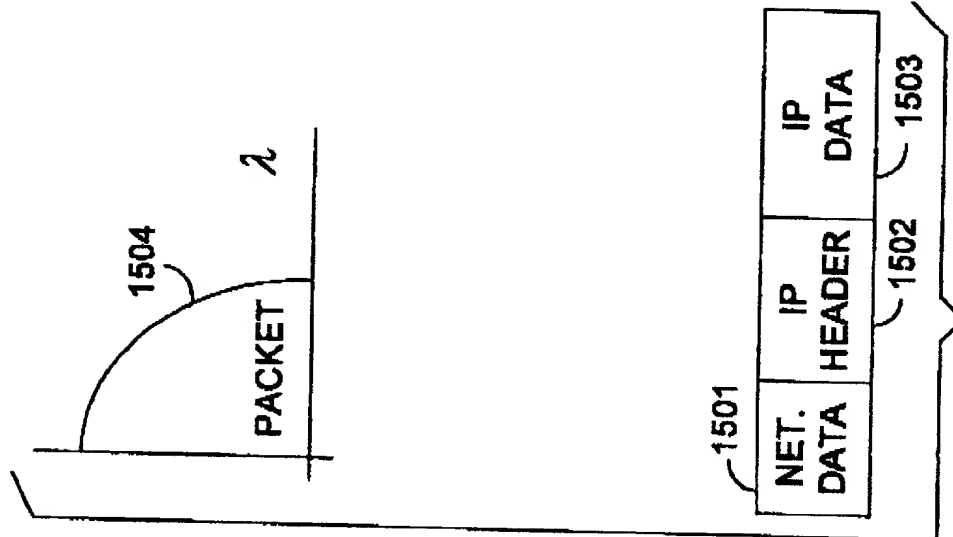


FIG. 15C

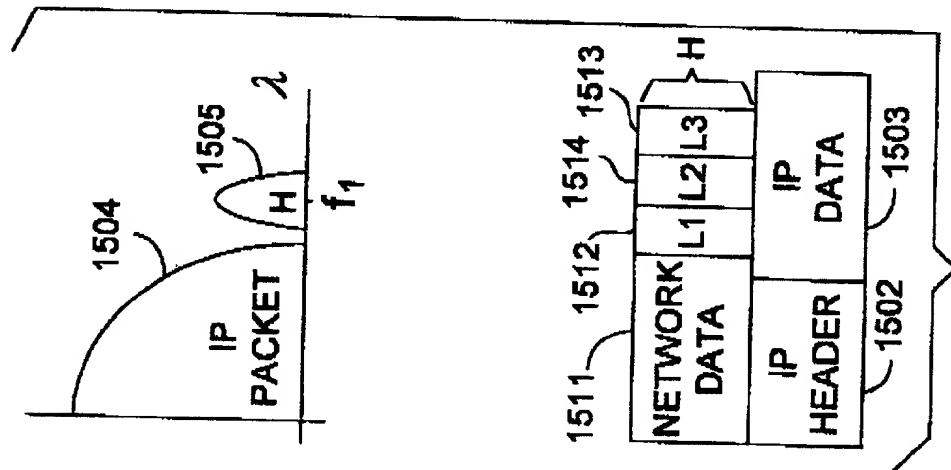


FIG. 15D

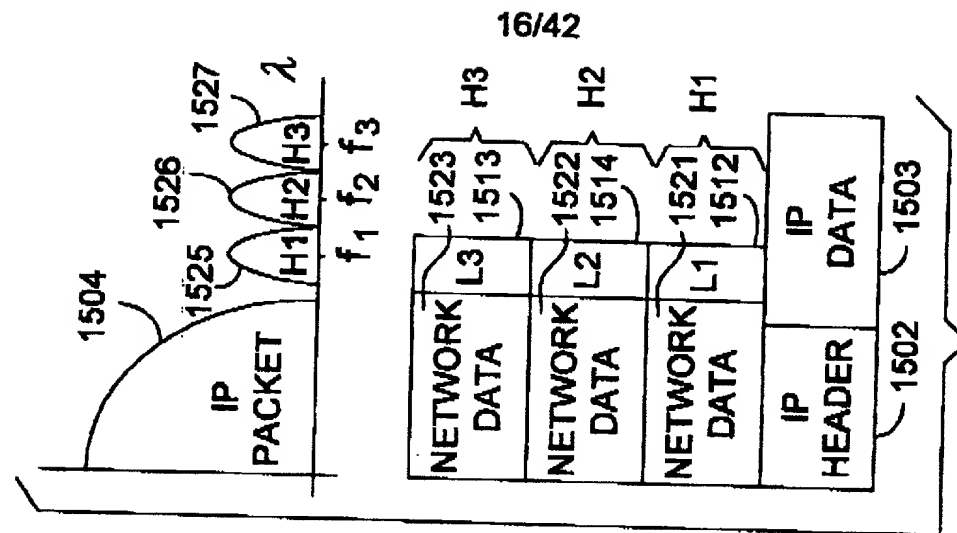
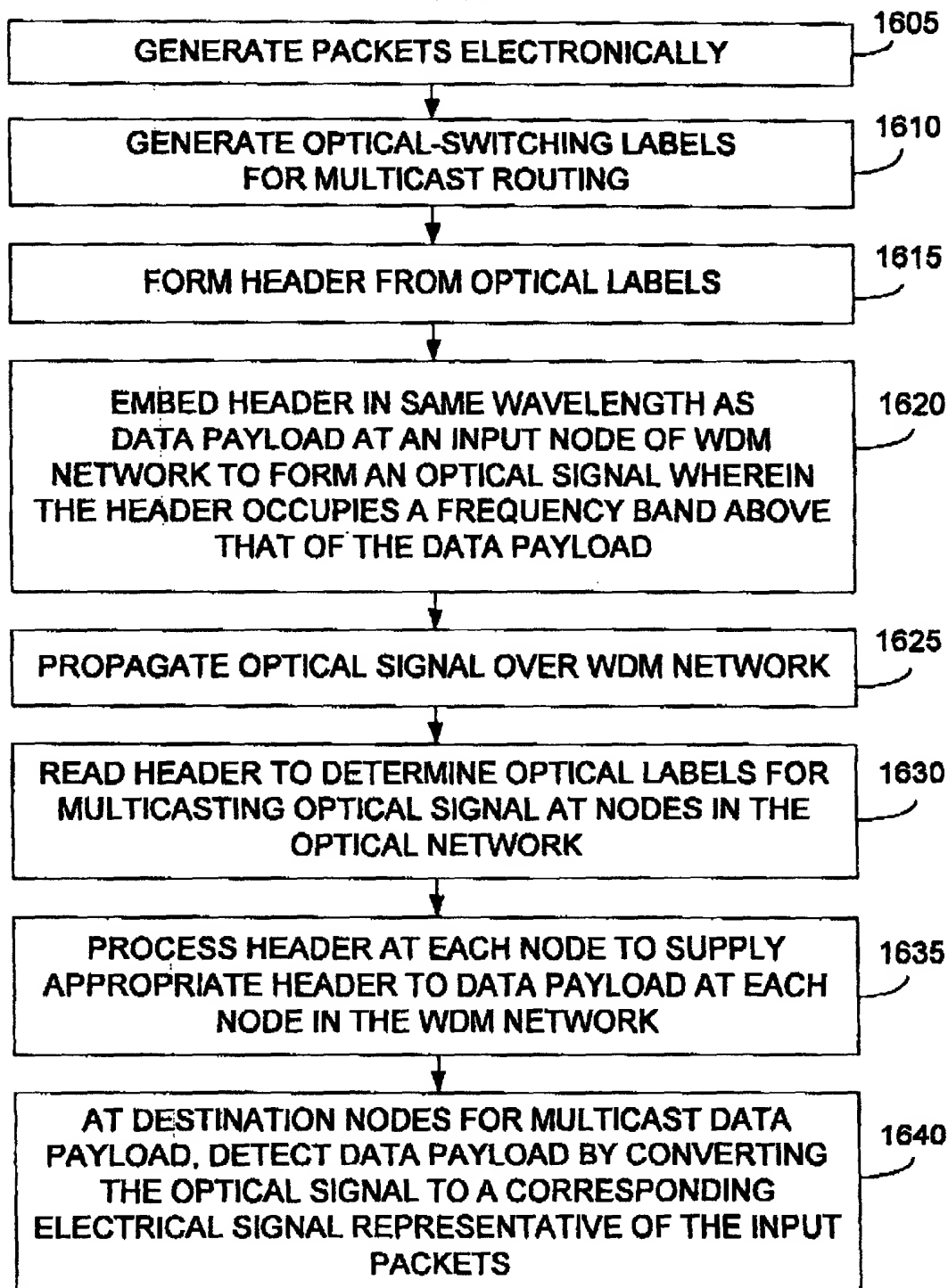
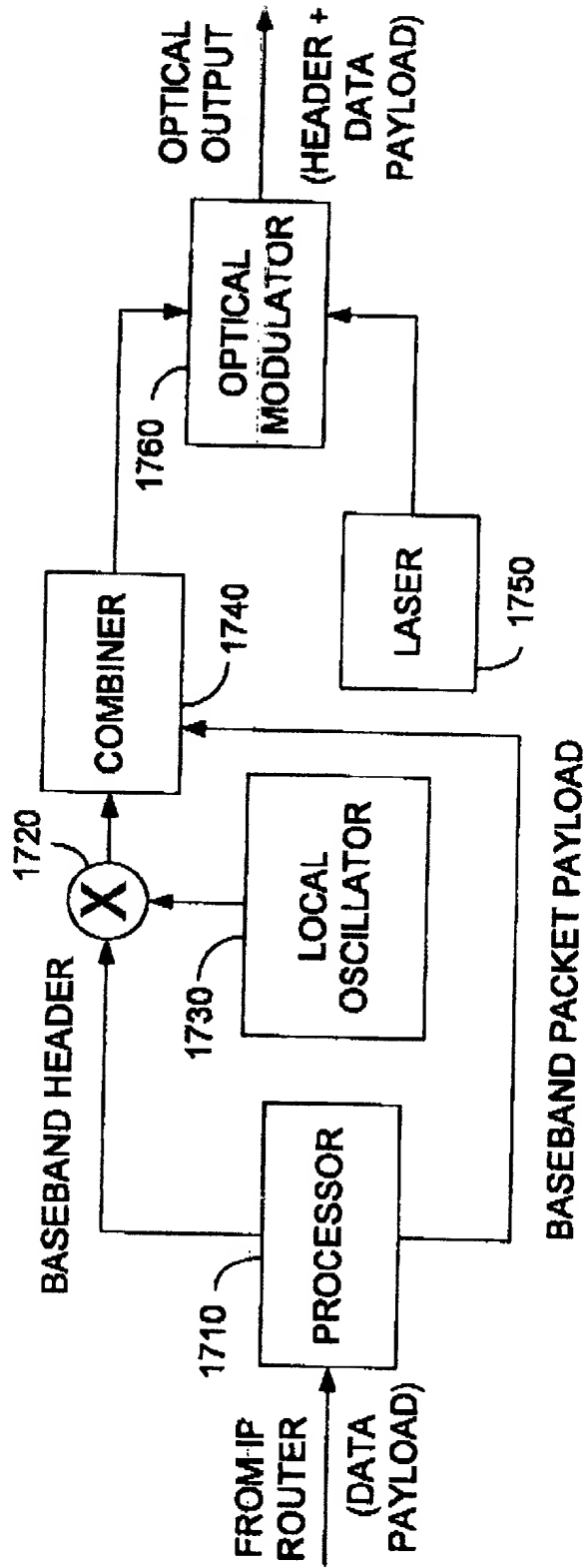


FIG. 15E





18/42

FIG. 17

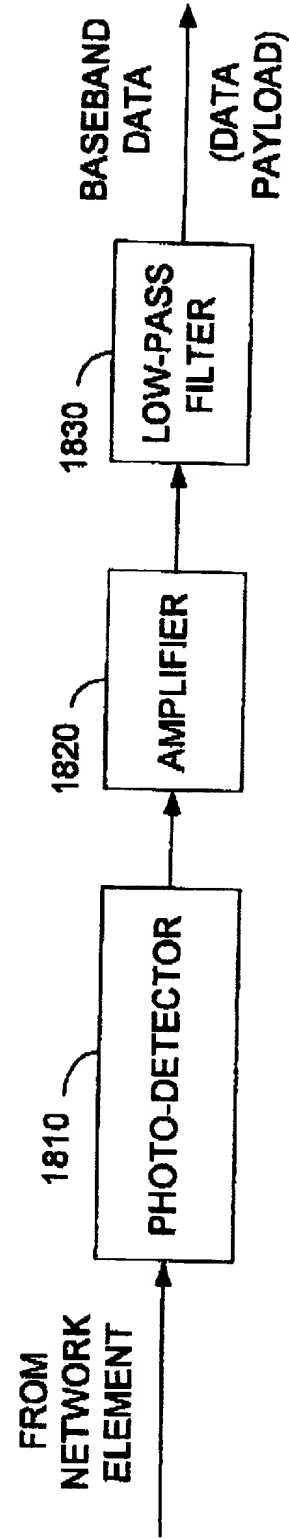


FIG. 18

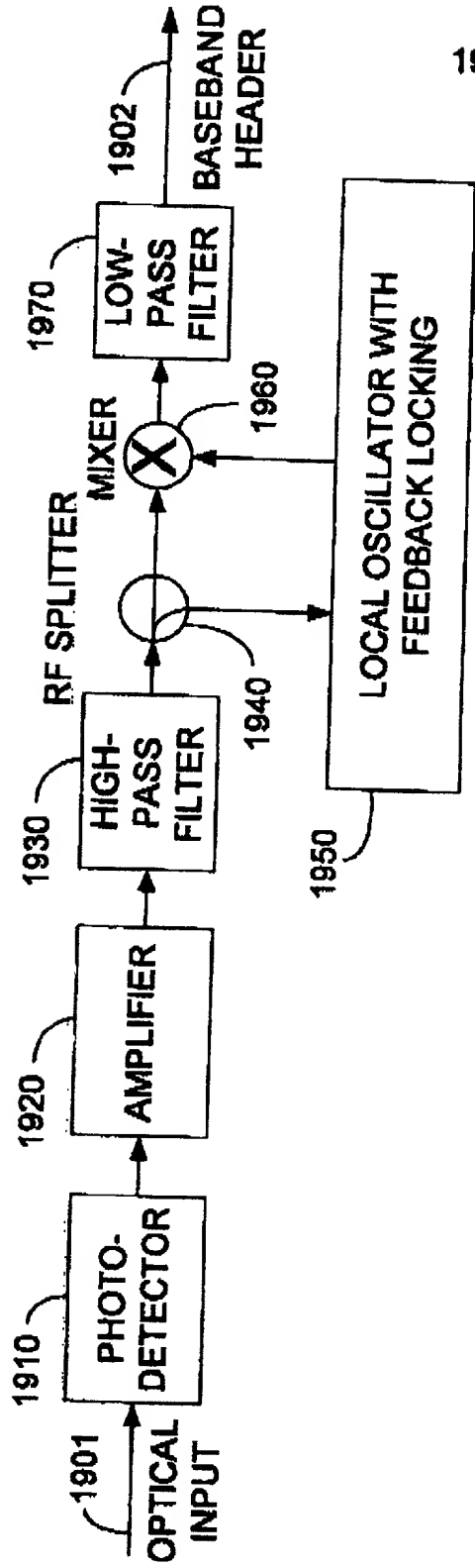


FIG. 19

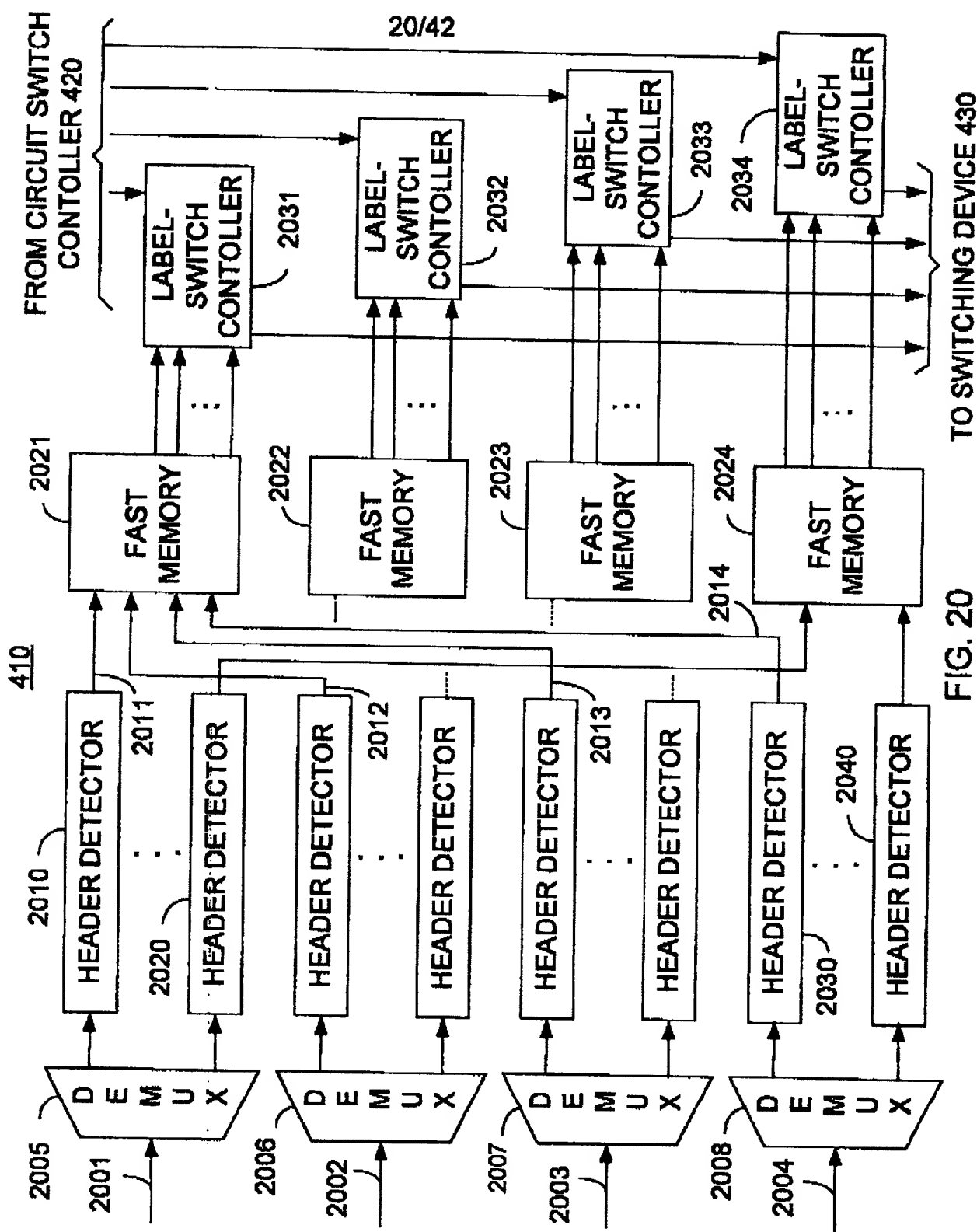
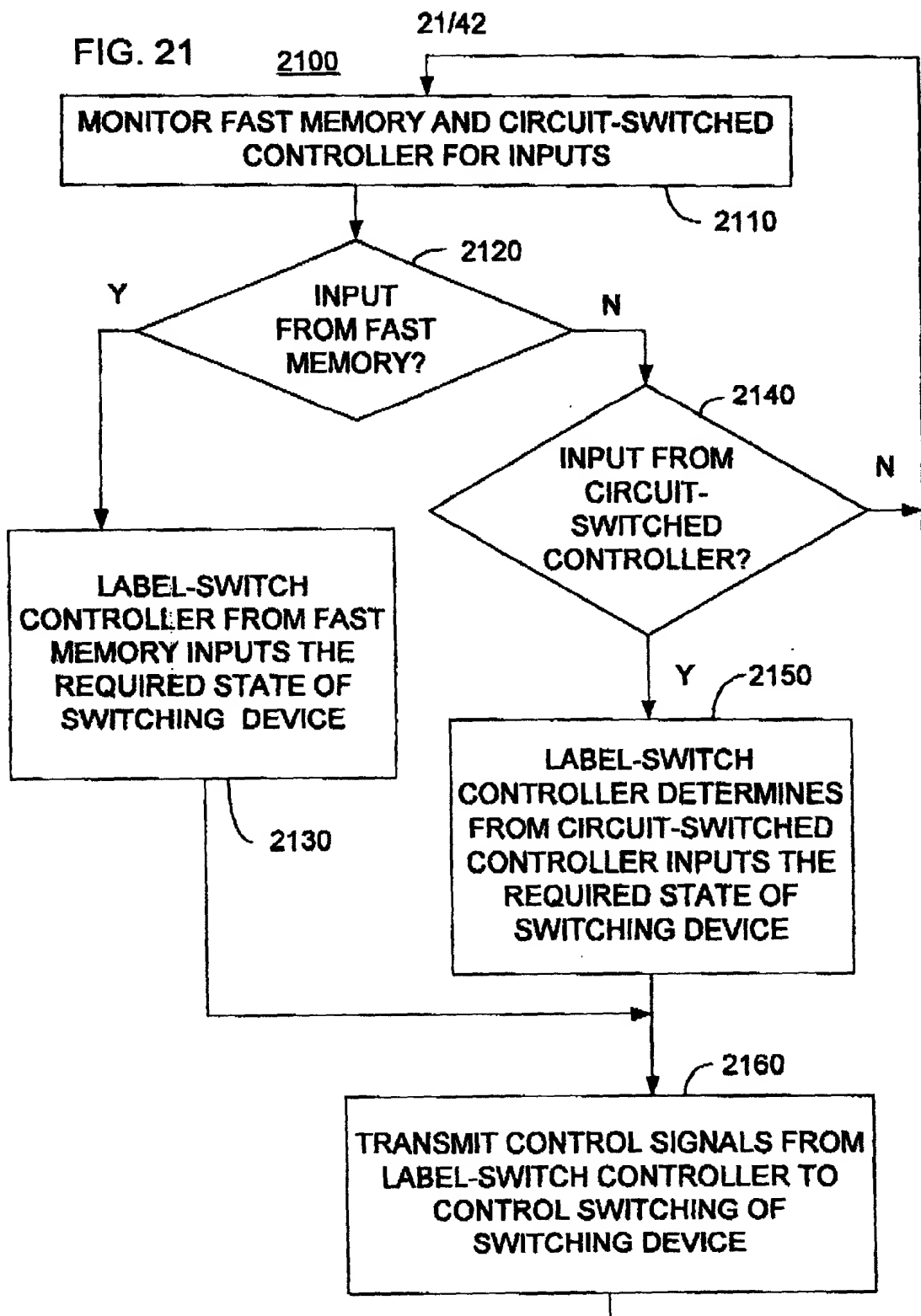
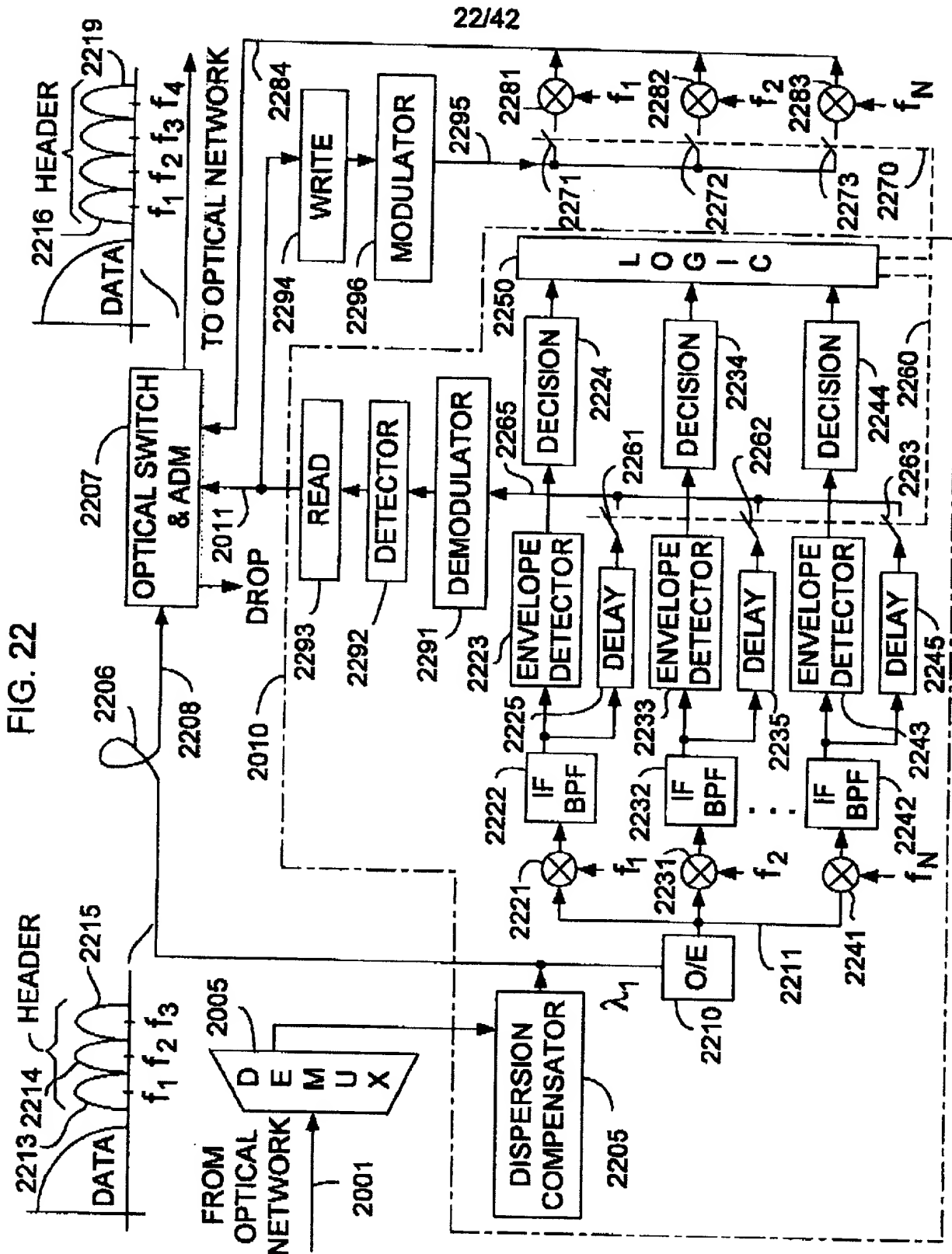


FIG. 20





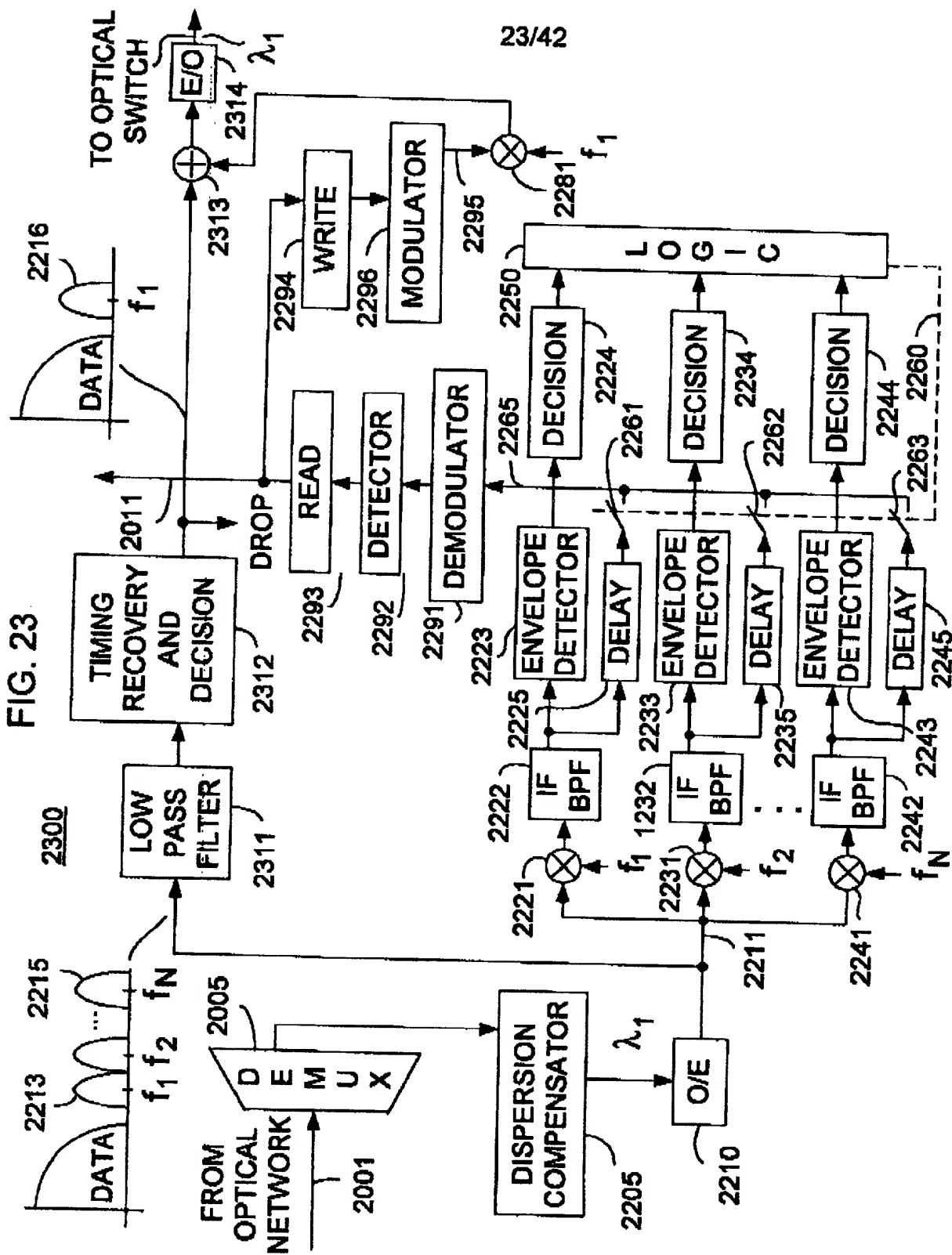


FIG. 24

FIG. 24 is a block diagram of a multi-channel optical demultiplexer system. The system is designed to process multiple optical channels simultaneously.

Input and Initial Processing:

- Input from the **FROM OPTICAL NETWORK 2001** enters the system.
- The signal passes through a **DISPERSION COMPENSATOR 2205**, which outputs at wavelength λ_1 .
- The signal then enters an **O/E 2210** (Optical-to-Electrical) converter.

Channel Processing and Detection:

- The signal is split into multiple channels, each identified by a frequency f_1, f_2, \dots, f_N .
- Each channel passes through an **IF BPF 2232** (Intermediate Frequency Bandpass Filter).
- The filtered signals are then processed by **ENVELOPE DETECTOR 2225** and **DELAY 2233** blocks.
- The processed signals are fed into **DECISION 2224** blocks.
- The output of the decision blocks is sent to an **O/E 2410** (Optical-to-Electrical) converter.

Control and Feedback Path:

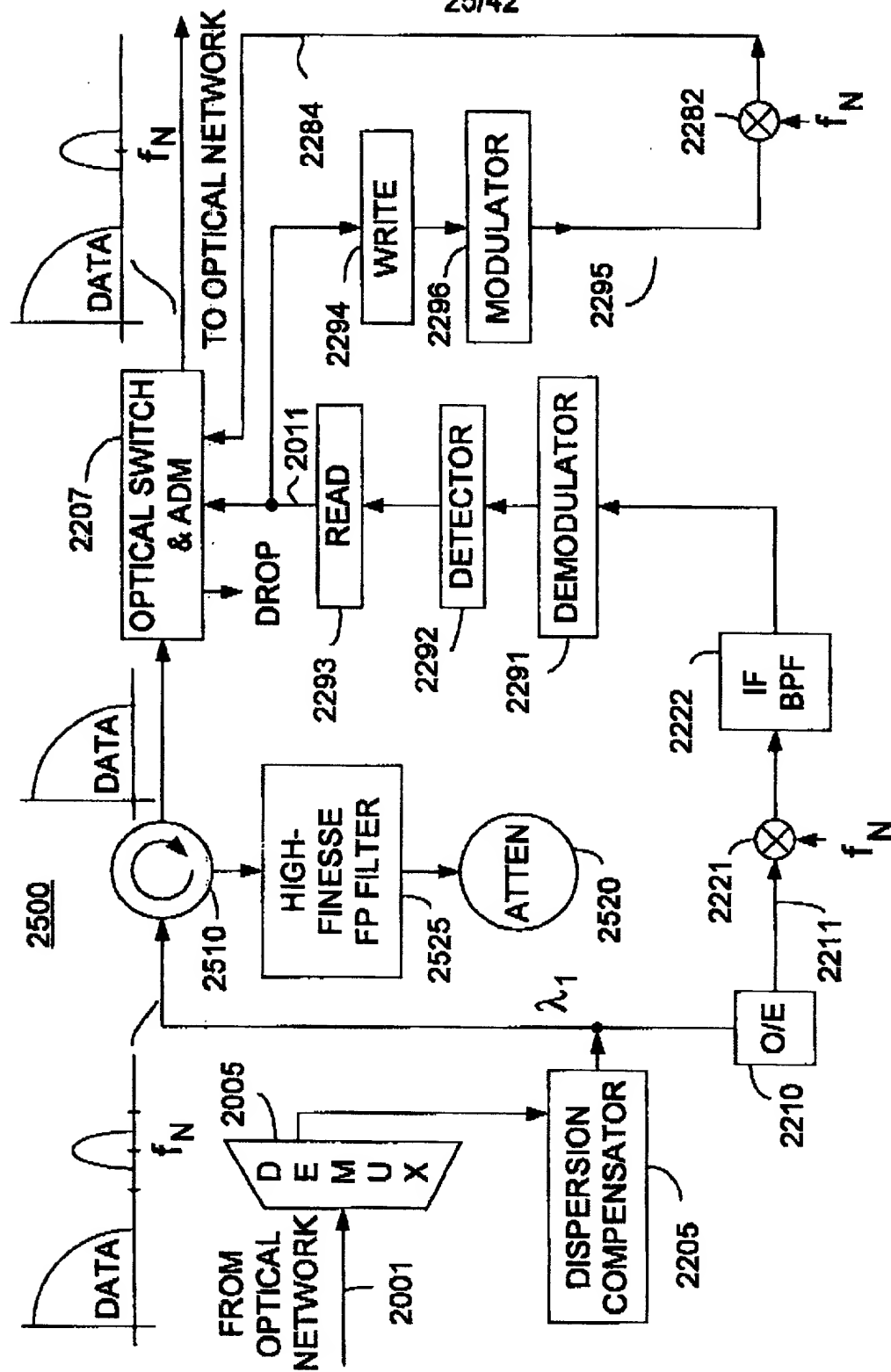
- The system includes a **DECISION 2440** block that receives input from the **O/E 2410**.
- The output of the decision block is sent to an **OPTICAL SWITCH 2433**.
- The switch directs the signal to either the **ENVELOPE DETECTOR 2225** or the **WRITE 2284** section.
- The **WRITE 2284** section includes a **MODULATOR 2296** and a **DETECTOR 2292**.

Output and Network Interface:

- The system includes an **OPTICAL SWITCH & ADM 2207** (Add-Drop Multiplexer) that interfaces with the **TO OPTICAL NETWORK 2460**.
- The switch also receives input from the **DISPERSION COMPENSATOR 2205**.

Optical Header and Control Signals:

- The system is controlled by an **OPTICAL HEADER 2471**, which includes **PRE-AMBLE 2472** and **CW LIGHT SIGNALS 2473**.
- The header signals are used to control various components, including the **DISPERSION COMPENSATOR 2205** and the **OPTICAL SWITCH & ADM 2207**.



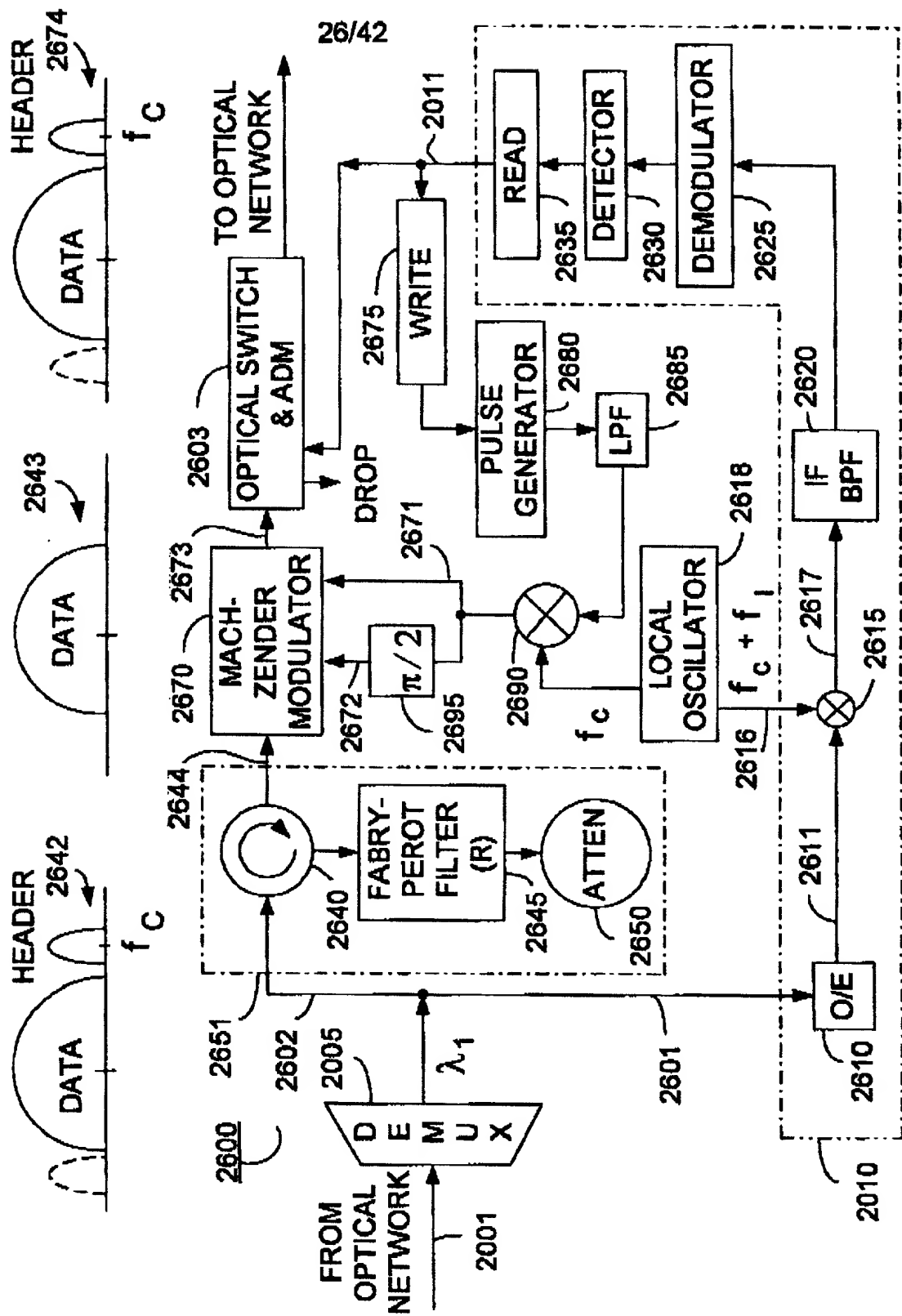


FIG. 26

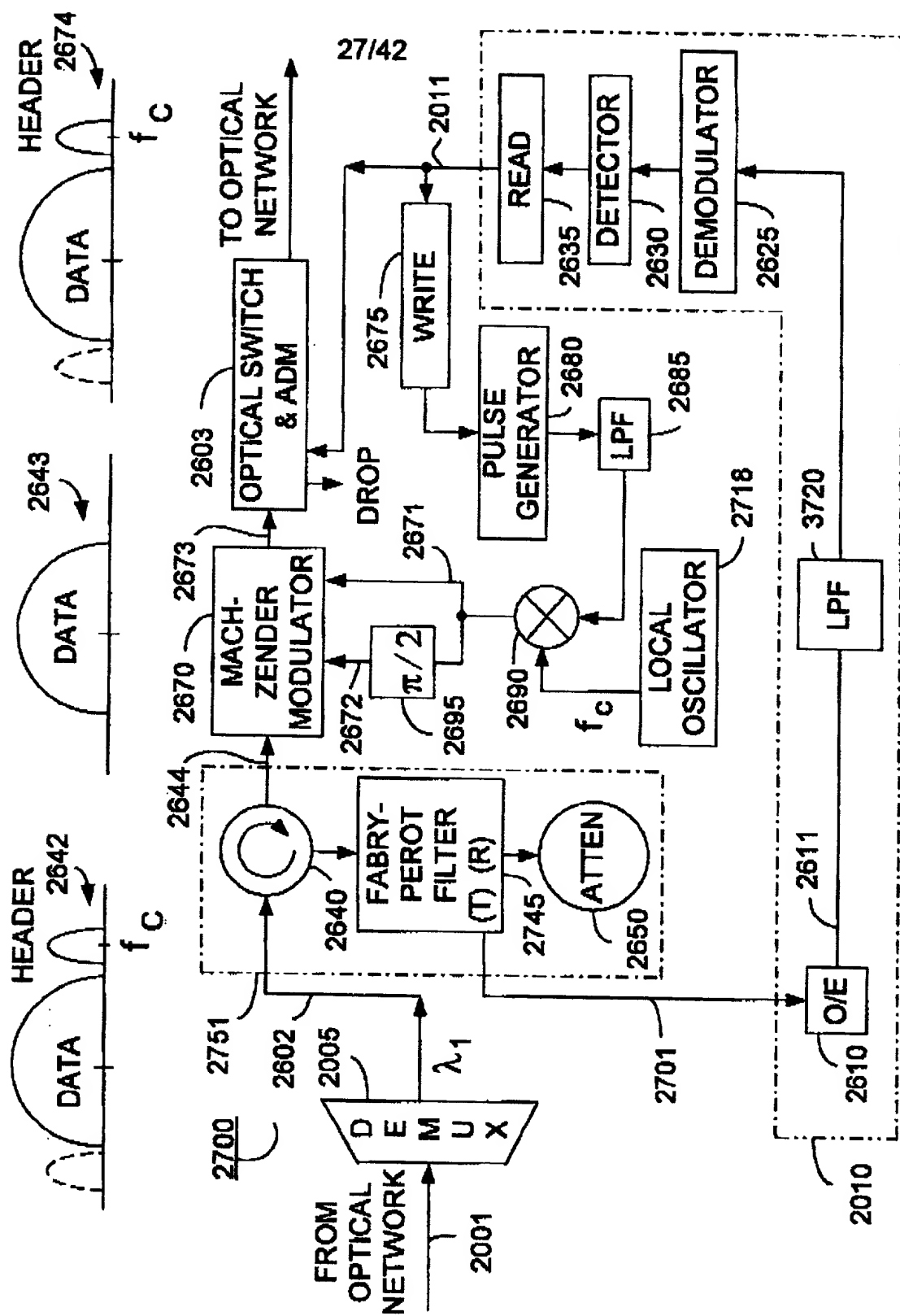
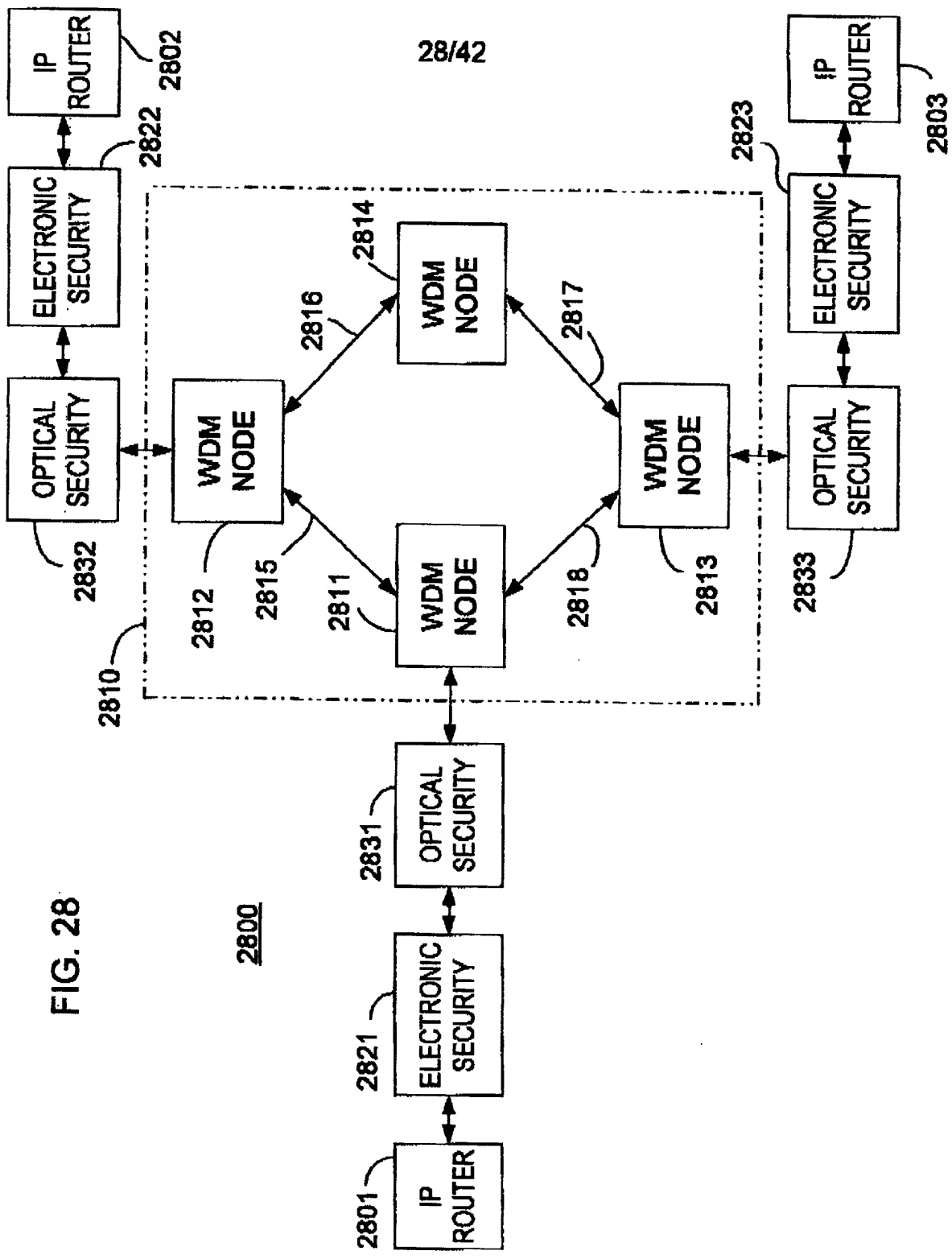


FIG. 27



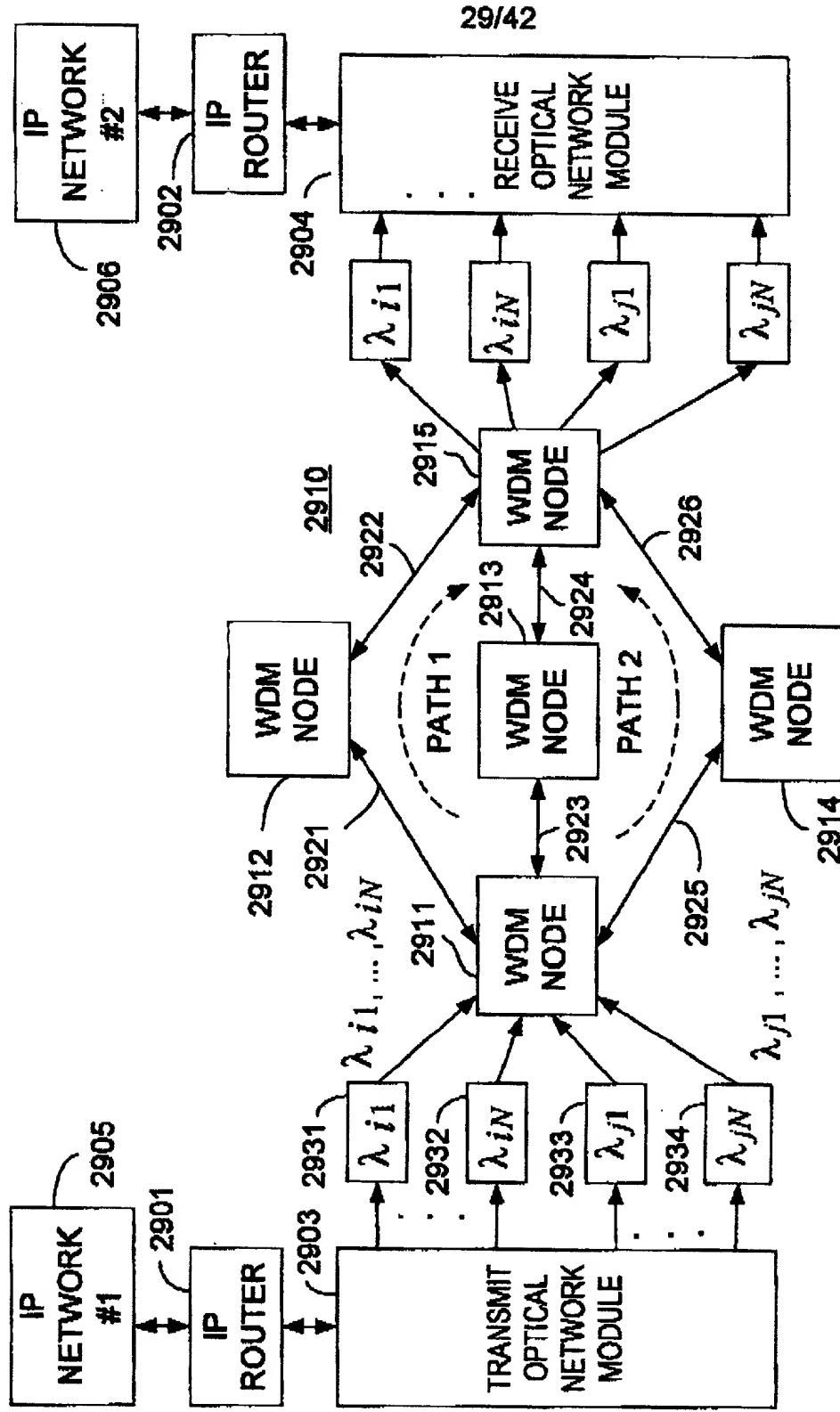


FIG. 29

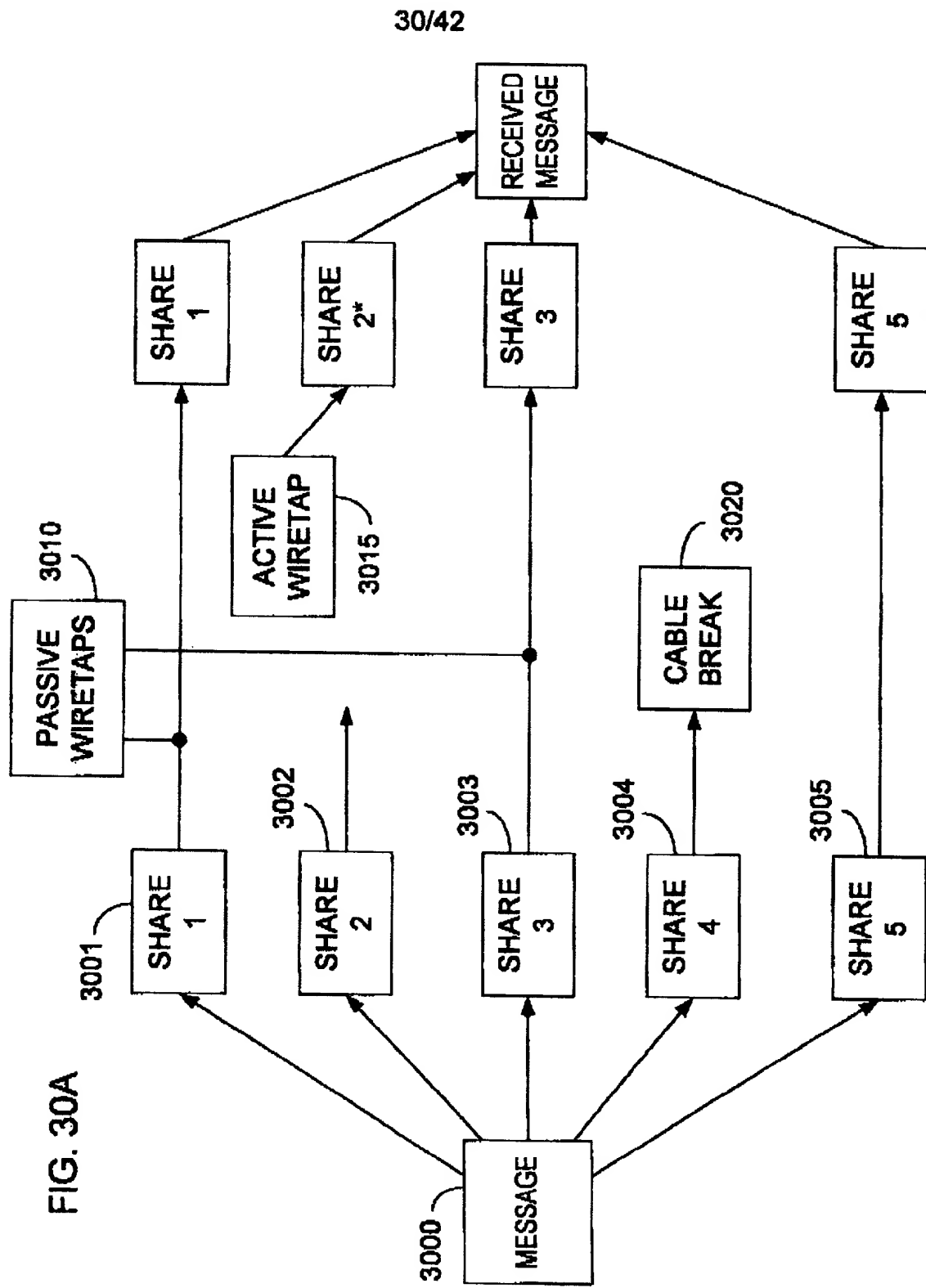
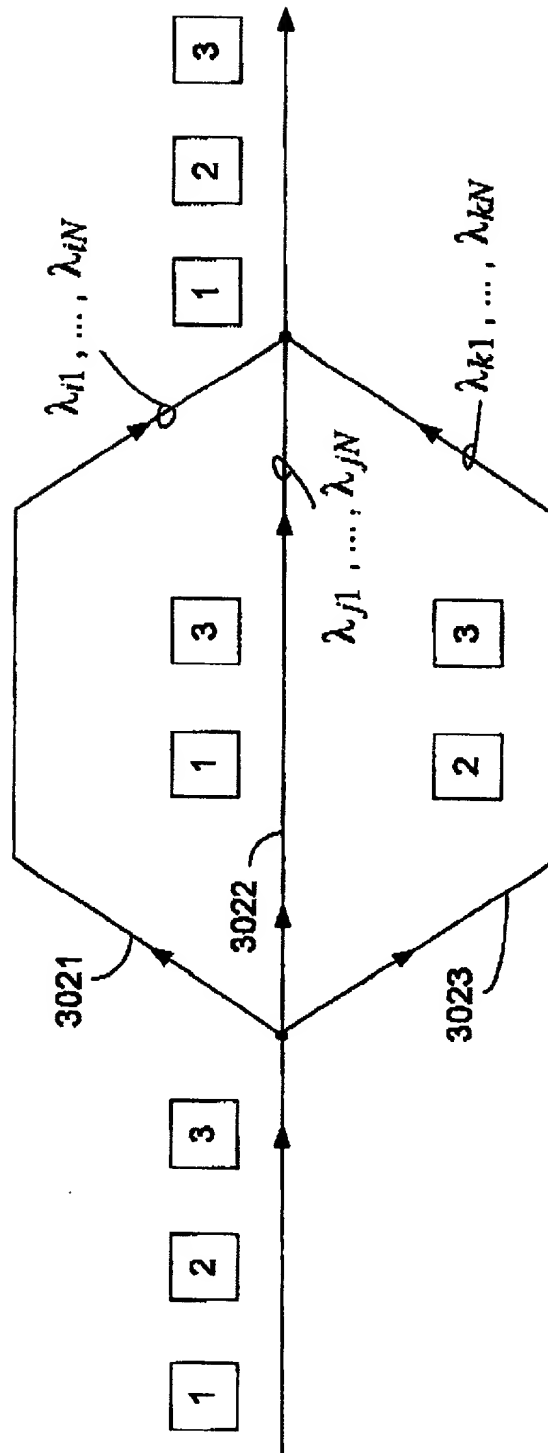


FIG. 30B



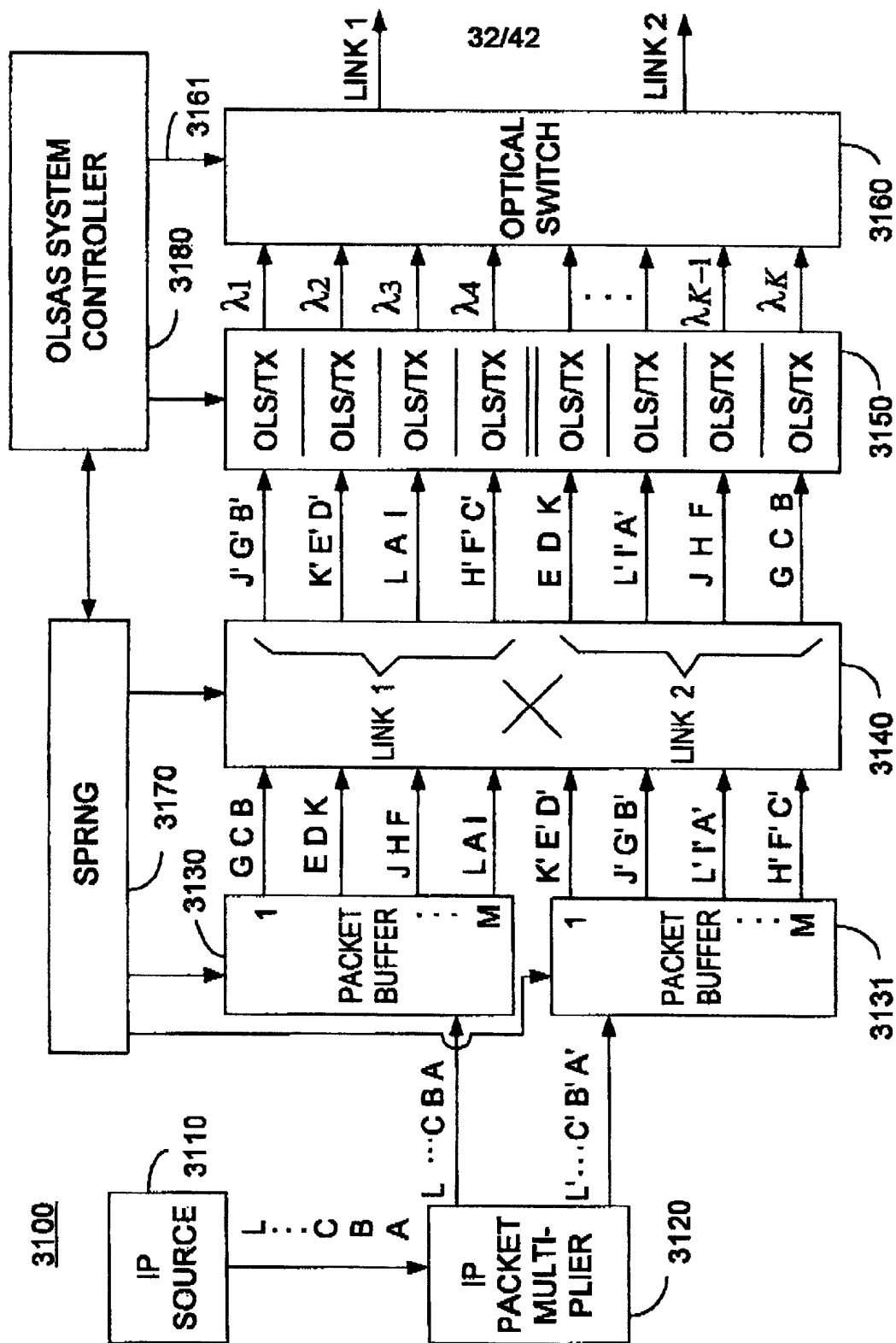
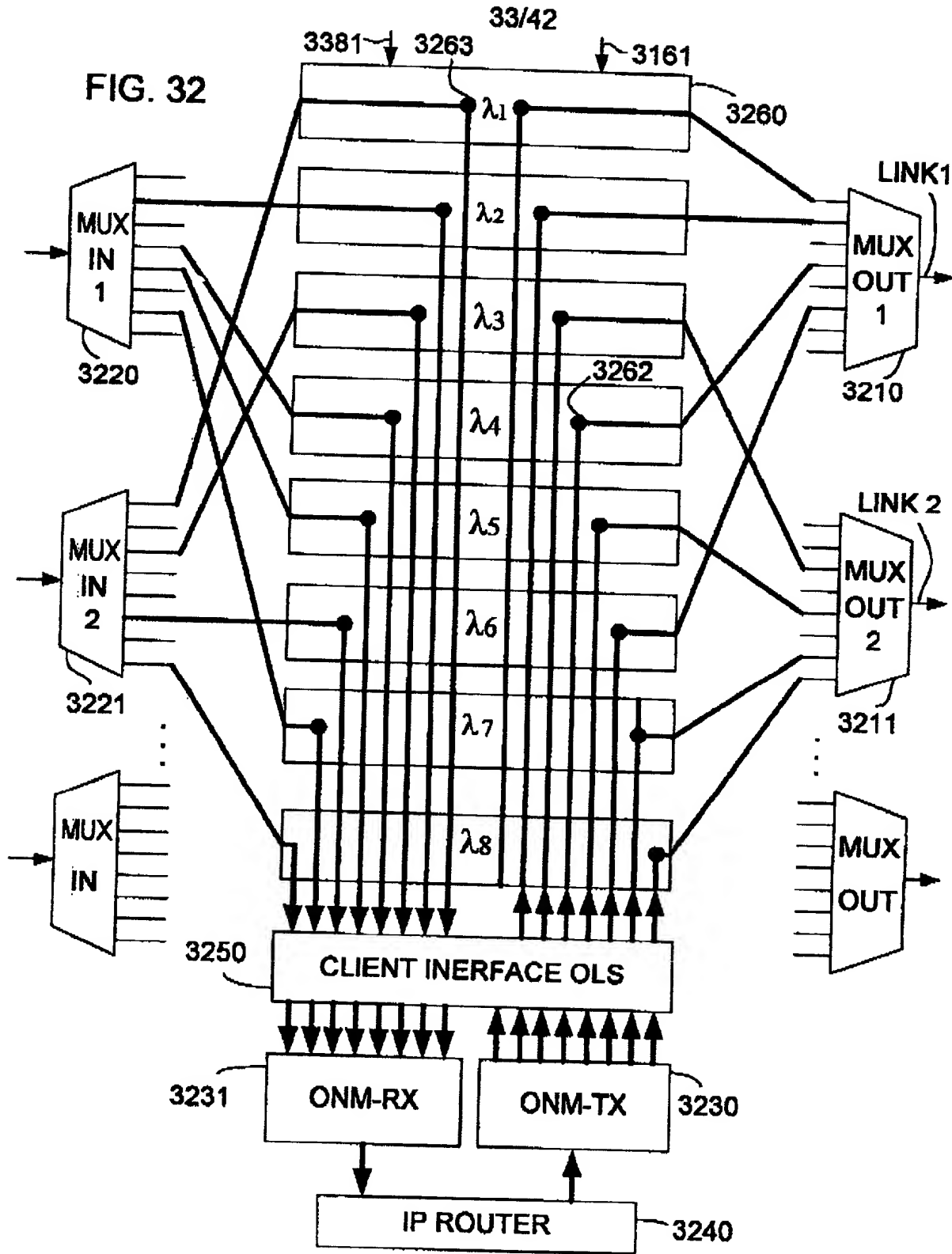


FIG. 31



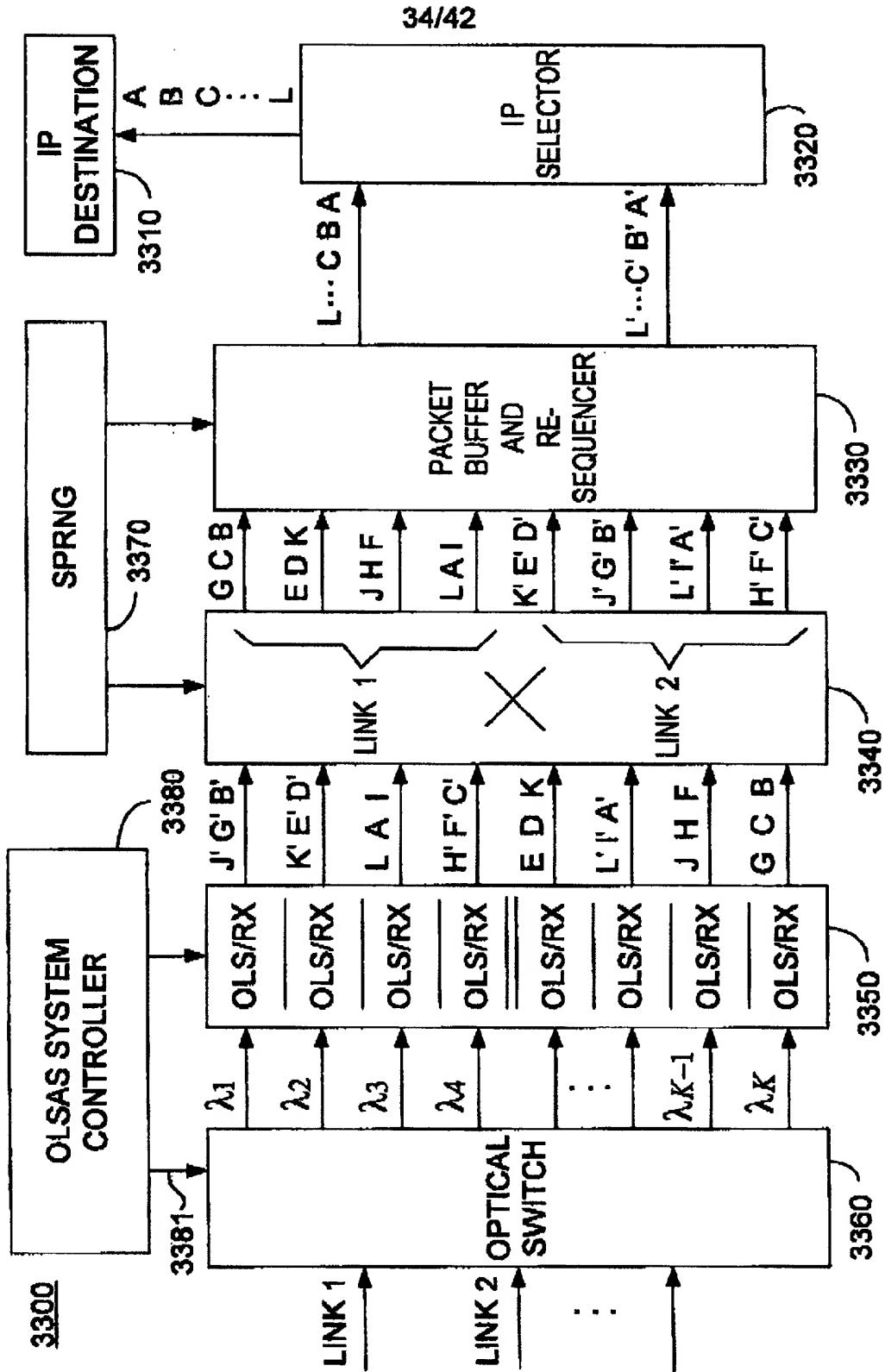
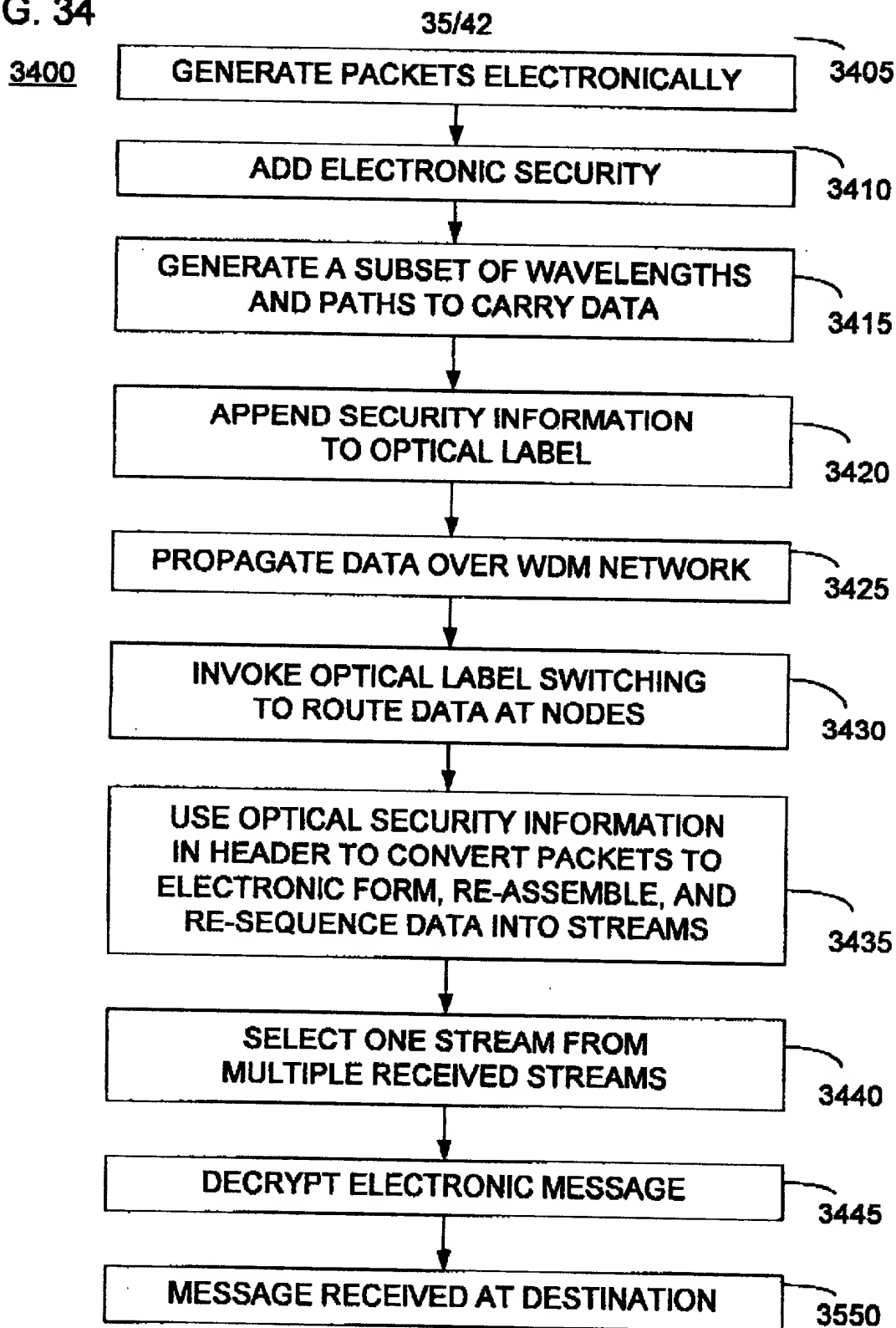


FIG. 33

FIG. 34



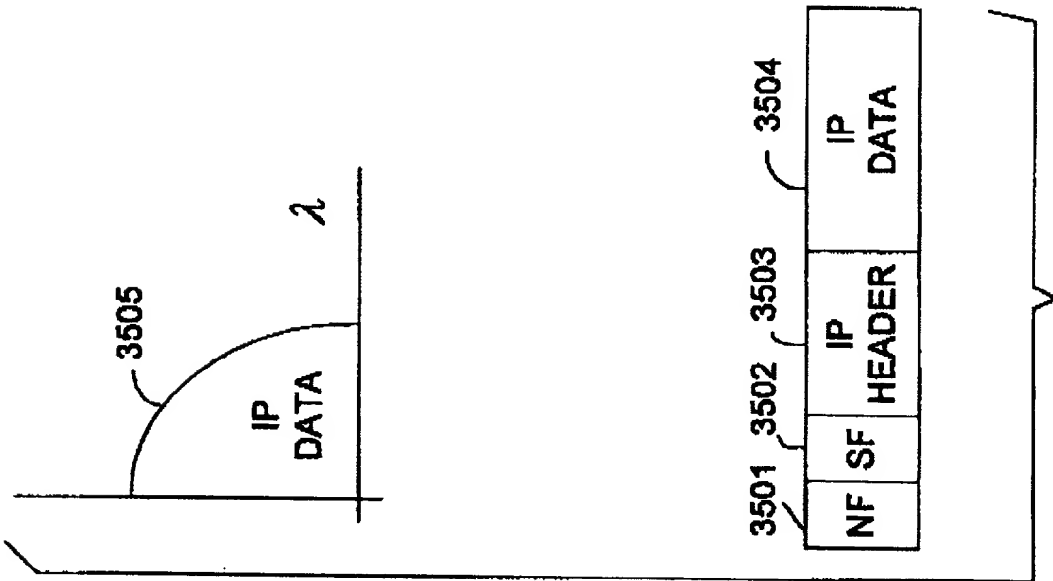


FIG. 35A

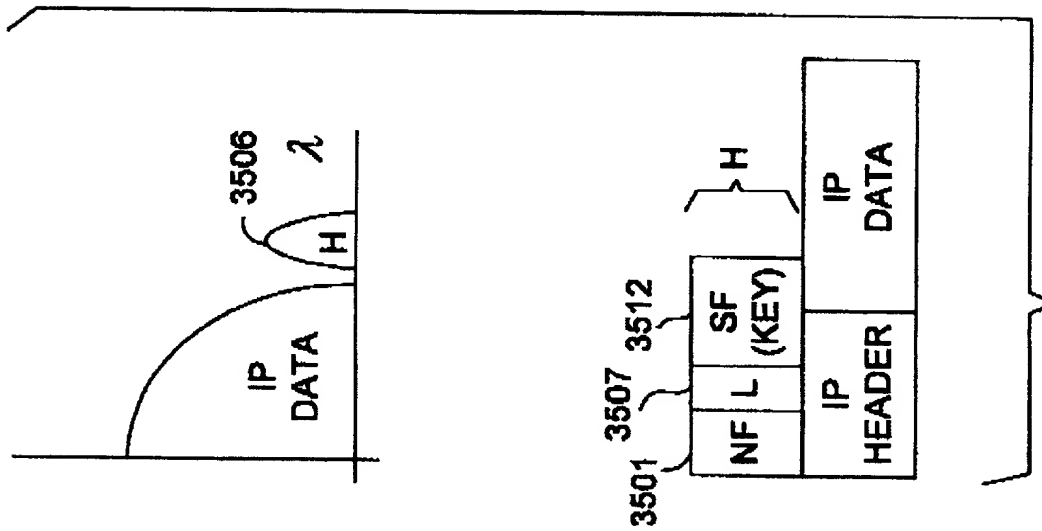


FIG. 35B

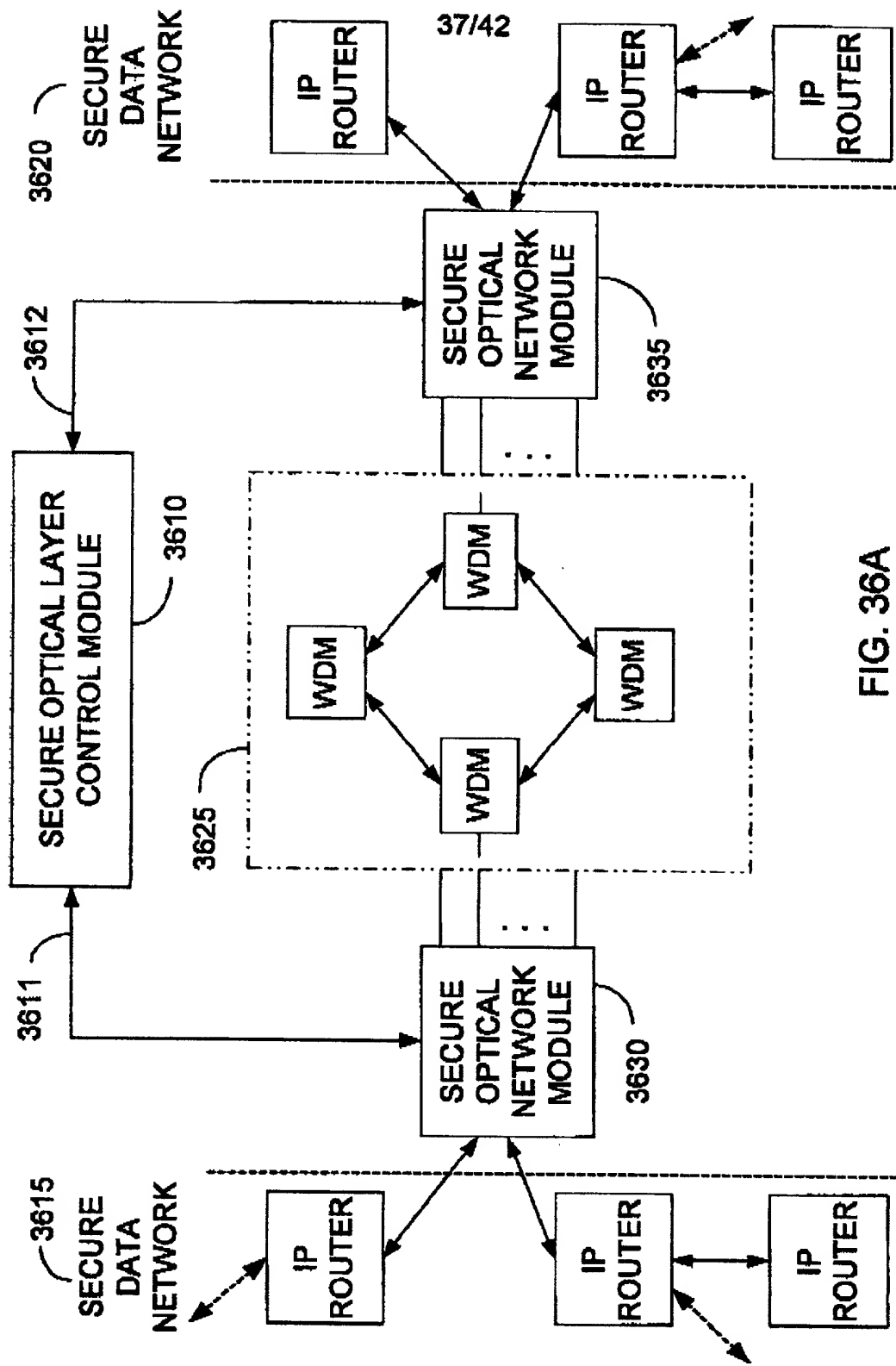


FIG. 36A

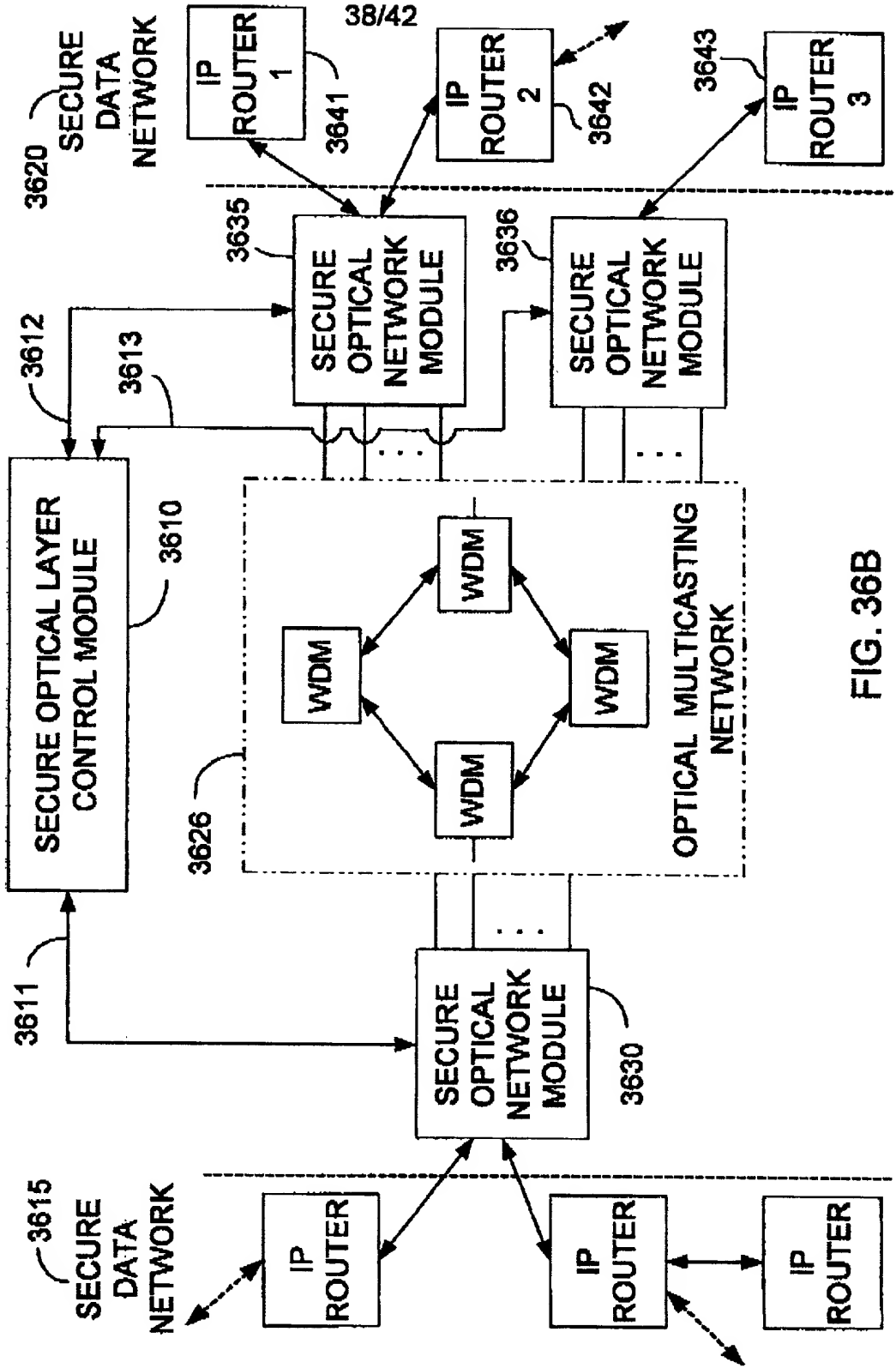


FIG. 36B

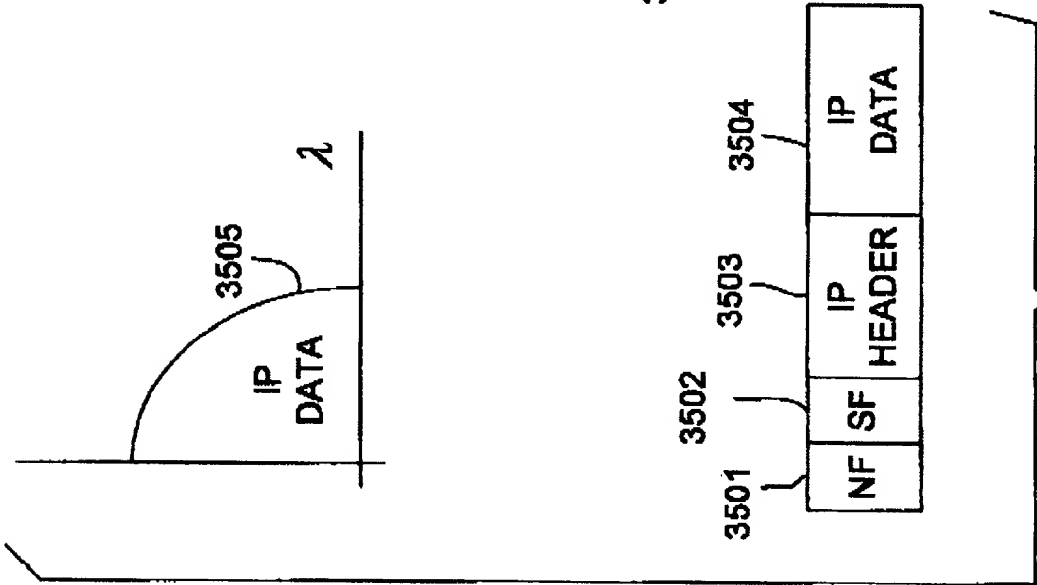


FIG. 37A

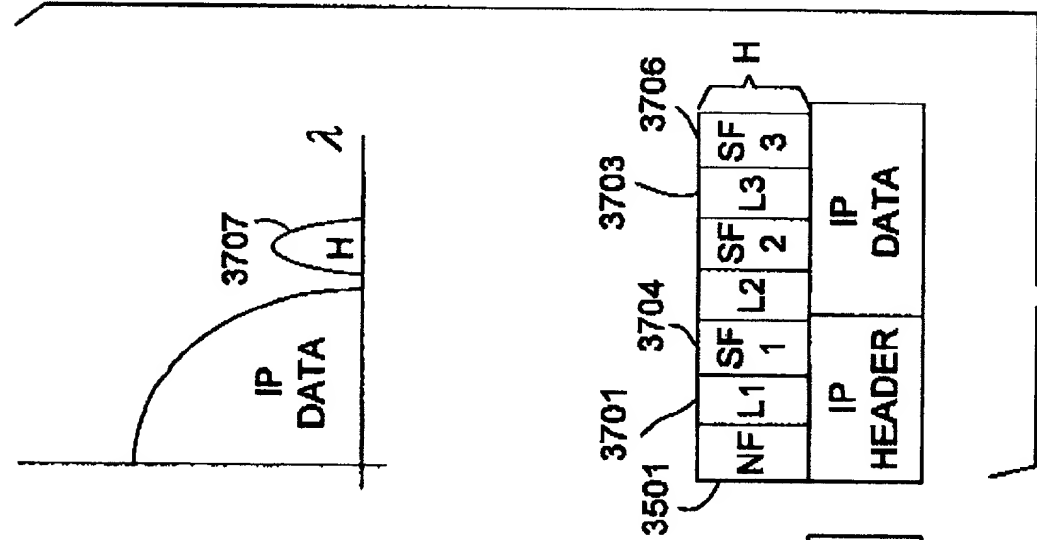


FIG. 37B

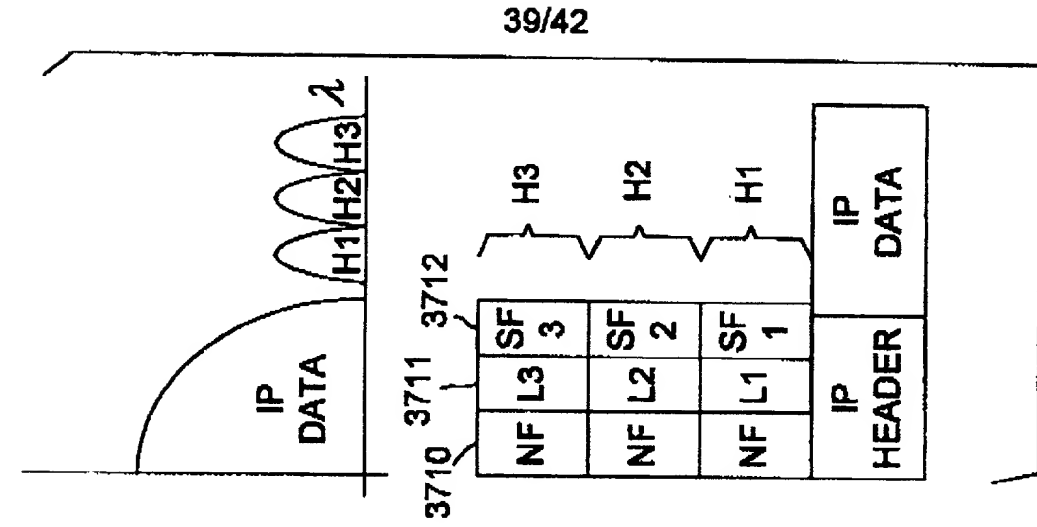
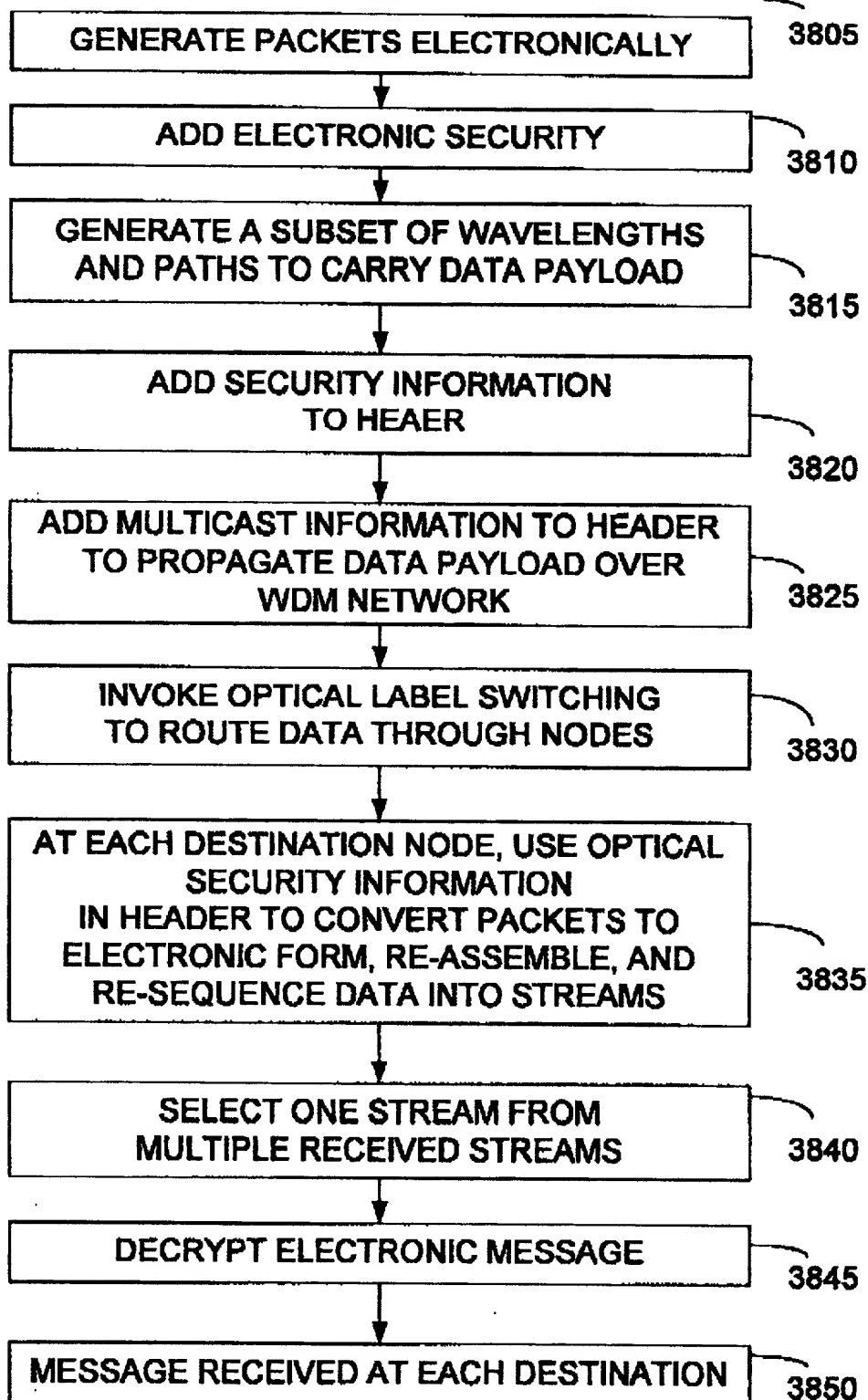


FIG. 37C

FIG. 38

40/42

3800



0972504 013001

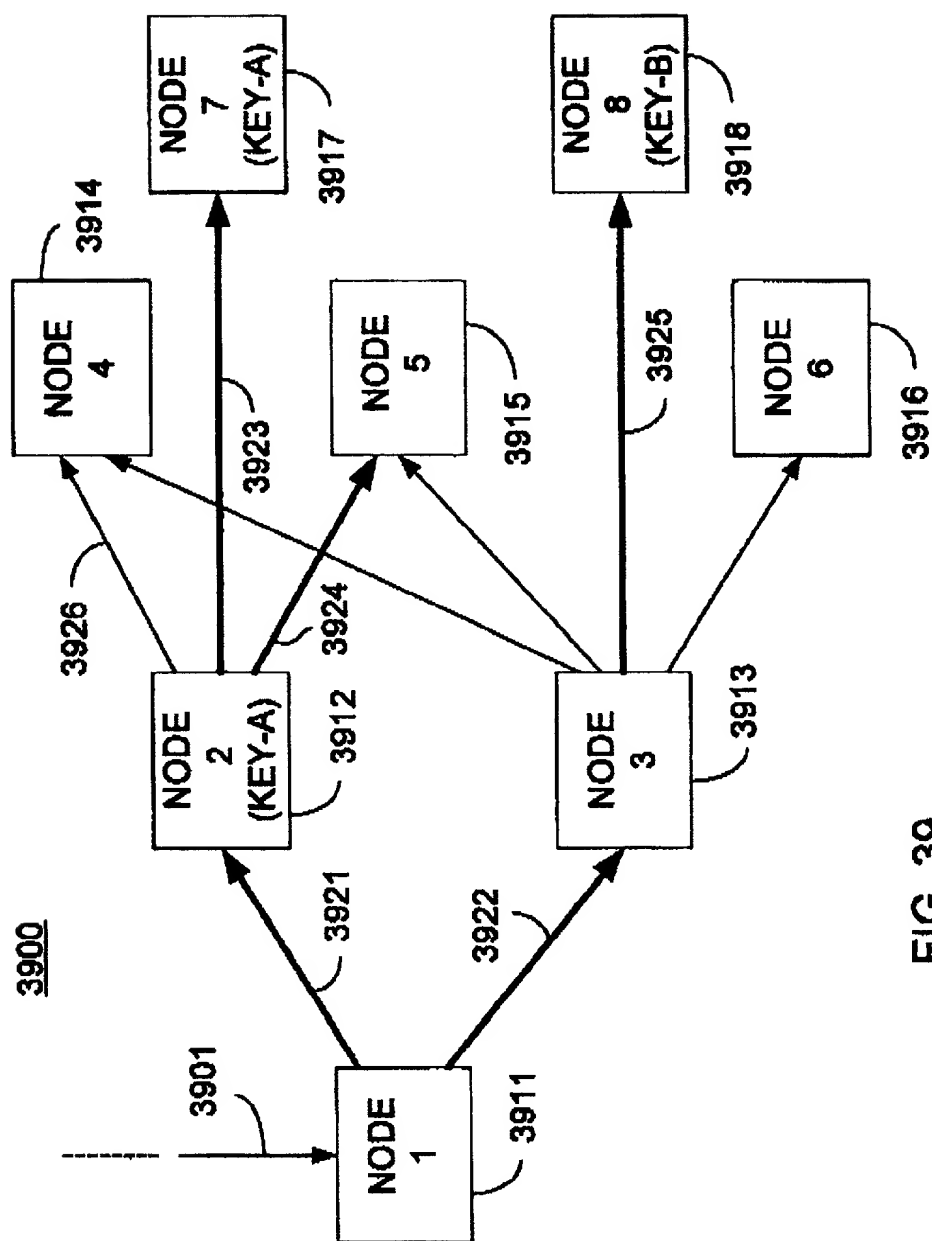


FIG. 39

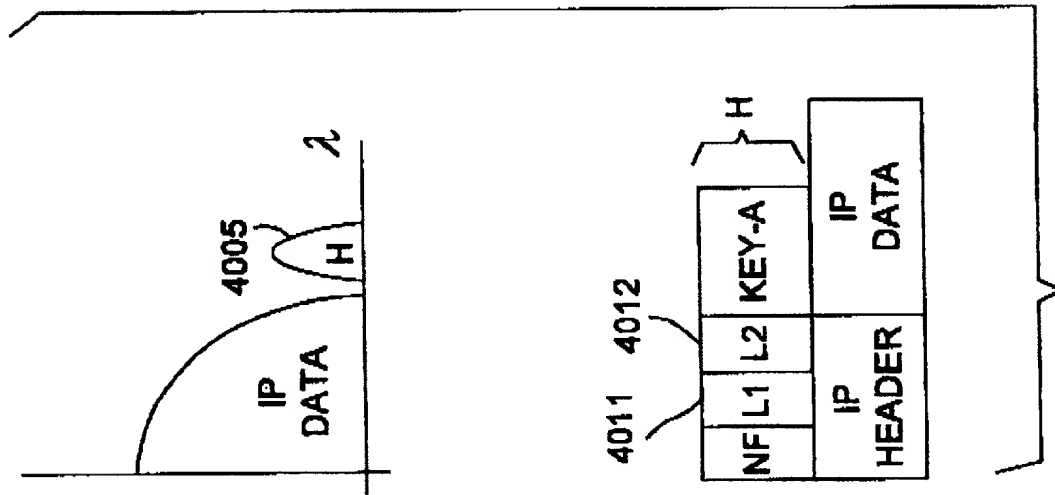


FIG. 40A

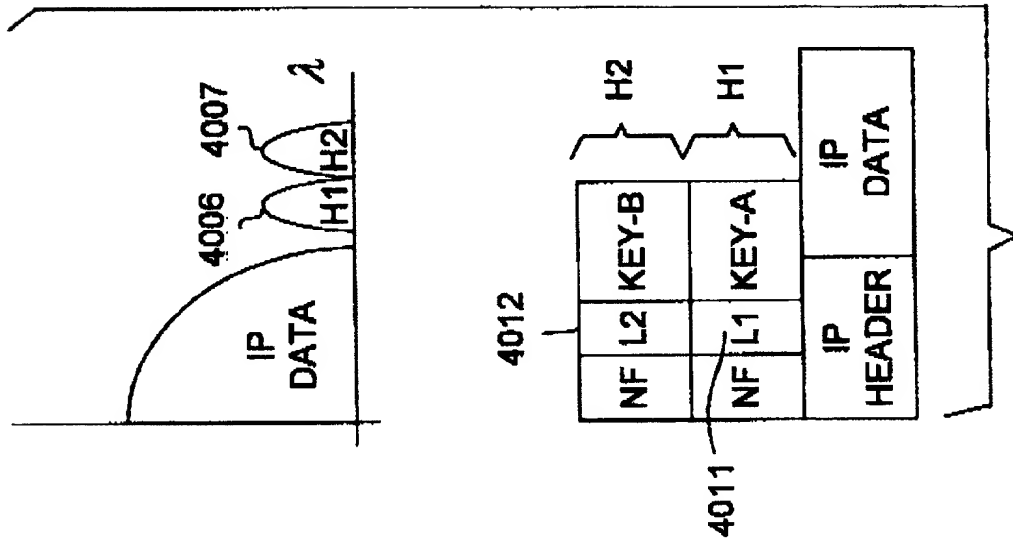


FIG. 40B